

STATE OF INDIANA

FILED

INDIANA UTILITY REGULATORY COMMISSION

MAY 04 2007

PETITION OF THE CITY OF EVANSVILLE,)
INDIANA, BY ITS WATER AND SEWER UTILITY)
BOARD, FOR AUTHORITY TO ISSUE BONDS,)
NOTES, OR OTHER OBLIGATIONS, FOR)
AUTHORITY TO INCREASE ITS RATES AND)
CHARGES FOR WATER SERVICE, AND FOR)
APPROVAL OF NEW SCHEDULES OF WATER)
RATES, CHARGES, AND RULES AND)
REGULATIONS FOR WATER SERVICE, AND)
FOR APPROVAL OF ACCOUNTING AND)
RATEMAKING TREATMENT FOR WATER)
SERVICE TO REFLECT THE IMPACT OF)
REASONABLY FIXED, KNOWN AND)
MEASUREABLE CAPITAL REQUIREMENTS)
OVER THE NEXT THREE CALENDAR YEARS.)

INDIANA UTILITY
REGULATORY COMMISSION

CAUSE NO. 43190

PREFILED TESTIMONY AND EXHIBITS OF

MARGARET A. STULL – PUBLIC’S EXHIBIT NO. 1

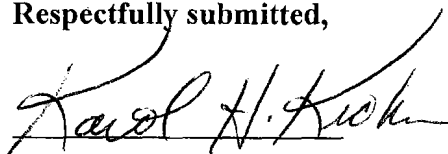
ROGER A. PETTIJOHN – PUBLIC’S EXHIBIT NO. 2

THE INDIANA OFFICE OF

UTILITY CONSUMER COUNSELOR

MAY 2007

Respectfully submitted,



Karol H. Krohn

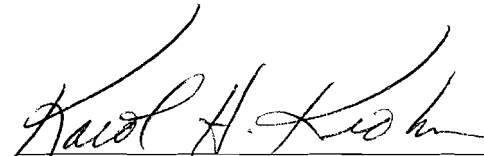
Assistant Consumer Counselor

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing has been served upon the following parties of record in the captioned proceeding by electronic mail on May 4, 2007.

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MARGARET A. STULL – PUBLIC’S EXHIBIT NO. 1

TESTIMONY OF MARGARET A. STULL
CAUSE NO. 43190
CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT

I. Introduction

1 **Q: Please state your name and business address.**

2 A: My name is Margaret A. Stull and my business address is Indiana Government Center
3 North, Room N501, 100 North Senate Avenue, Indianapolis, Indiana 46204.

4 **Q: By whom are you employed and in what capacity?**

5 A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC") as a
6 Utility Analyst in the Water/Wastewater Division.

7 **Q: Please describe your background and experience.**

8 A: I graduated from the University of Houston at Clear Lake City in August 1982 with a
9 Bachelor of Science degree in accounting. From 1982 to 1985, I held the position of Gas
10 Pipeline Accountant at Seagull Energy in Houston, Texas. From 1985 until 2001 I
11 worked for Enron in various positions of increasing responsibility and authority; first in
12 their gas pipeline accounting department, then in financial reporting and planning, both
13 for the gas pipeline group and the international group, and finally providing accounting
14 support for infrastructure projects in Central and South America. From 2002 until 2003, I
15 held non-utility accounting positions in Indianapolis. In August 2003, I accepted my
16 current position with the OUCC. Since joining the OUCC I have attended the NARUC
17 Eastern Utility Rate School in Clearwater Beach, Florida.

1 **Q: Have you held any professional licenses?**

2 A: Yes. I passed the CPA exam in 1984 and was licensed as a CPA in the State of Texas.

3 **Q: Have you testified previously before the Indiana Utility Regulatory Commission**
4 **("IURC" or "Commission")?**

5 A: Yes.

6 **Q: What is the purpose of your testimony?**

7 A: I address Petitioner's proposed phased-in rate increase and specific revenue requirements,
8 In addition, I propose *pro forma* adjustments to certain test year operating expenses.

9 **Q: What have you done to prepare for your presentation of testimony in this**
10 **proceeding?**

11 A: I read Petitioner's testimony, reviewed its workpapers, and conducted an onsite review of
12 Petitioner's books and records with other OUCC technical staff (March 28 - 30, 2007). I
13 also reviewed Petitioner's IURC Annual Reports for the years 2005, 2004, and 2003 and
14 its responses to OUCC discovery request questions. Finally, I attended several meetings
15 with other OUCC staff members to identify and discuss the issues in this cause.

16 **Q: Are you sponsoring any schedules or attachments?**

17 A: Yes. I am sponsoring the following eight (8) accounting schedules:

18 Schedule 1 – Water Revenue Requirement and Reconciliation of Net Operating Income
19 Statement Adjustments

20 Schedule 2 – Comparative Balance Sheet as of May 31, 2006 and December 31, 2005,
21 2004, and 2003

22 Schedule 3 – Comparative Income Statement for the Years Ended May 31, 2006 and
23 December 31, 2005, 2004, and 2003

24 Schedule 4 – *Pro Forma* Net Operating Income Statement

25 Schedule 5 – Revenue Adjustments

Schedule 6 – Expense Adjustments

Schedule 7 – Working Capital

Schedule 8 – Debt Service

II. Petitioner's Proposed Rate Increase

Q: What is Petitioner requesting in this cause?

A: Petitioner is requesting approval of an across-the-board, three-phase rate increase and authority to issue \$36,000,000 in long-term debt through revenue bonds.

Q: Please explain Petitioner's proposed three-phase rate increase.

A: Petitioner proposes to spread the effect of its proposed rate increase over three years, with three separate, consecutive annual rate increases. The Phase I increase would take effect immediately, prior to Petitioner incurring additional long-term debt for planned capital improvement projects. The Phase I rate increase would cover increased operating expenses since Petitioner's last rate case.

The proposed Phase II increase would take place approximately one year later, when Petitioner plans to issue the new revenue bonds. The Phase II rate increase would cover increased depreciation and payments in lieu of property tax ("PILT") after completing ongoing capital improvement projects funded in Petitioner's last rate case. The Phase II increase would also cover the first year of debt service on the new revenue bonds proposed in this cause; and the associated increase in utility receipts tax ("URT").

The proposed Phase III rate increase would take place approximately one year after Phase II, when Petitioner has completed construction of the new proposed capital improvement projects. The proposed rate increase in Phase III would cover increased depreciation and

PILT related to the new capital improvement projects, debt service on the new revenue bonds (using a five-year average), and the associated increase in URT.

Q: How much of a rate increase is Petitioner requesting?

A: Petitioner is requesting an overall cumulative rate increase of 43.50% (Schedule 1, page 1), broken down as follows:

Phase I	12.10%
Phase II	16.80%
Phase III	9.60%

Q: Please explain why the sum of those three rate increases (which equals 38.50%) is less than the total overall rate increase requested by the Petitioner (i.e., 43.50%).

A: Because the three rate increases are cumulative, one cannot simply add the three individual rate increases together to determine the overall rate increase. There is a compounding effect, since the rate increase in Phase II will be applied to total revenue from increased rates already implemented in Phase I. Similarly, the rate increase proposed for Phase III will be applied to already higher rates implemented in Phase II.

Q: Do you accept Petitioner's proposed cumulative rate increase of 43.50%?

A: Yes. While Petitioner's asserted *pro forma* revenue requirement would justify a rate increase in excess of 50.0% (if accurate), the Petitioner is only proposing to increase rates by 43.50%, and to do so gradually, over a three-year period. (Although I do not agree that Petitioner has justified a rate increase in excess of 50.0%, the increase in revenue requirement I verified still exceeds Petitioner's proposed 43.50% cumulative rate increase. Therefore, the OUCC accepts the three-phase rate increase Petitioner proposed, for a total, overall rate increase of 43.50%.

1 **Q: Do you accept Petitioner's proposed phase-in of rates in this cause?**

2 A: Yes. I believe that Petitioner's proposed phase-in of rates is reasonable under the
3 circumstances. Subsequent phases are triggered by specific events, so rates will not
4 increase until those events occur. Phase II rates will not go into effect until Petitioner has
5 issued its new revenue bonds. Similarly, Phase III rates will not go into effect until
6 Petitioner completes (or substantially completes) the capital improvement projects to be
7 funded with new revenue bonds. This method also facilitates any true-ups that might be
8 required due to variances in interest rates, actual project costs, the total amount of new
9 debt issued, actual debt service reserve requirements, *etc.*

10 **III. Petitioner's *Pro Forma* Revenue Requirement**

11 **Q: Please explain how the overall cumulative revenue requirement you projected**
12 **differs from the amount the Petitioner proposed.**

13 A: As shown in the following table (Table MAS-1), I agree with most of Petitioner's *pro*
14 *forma* revenue requirements. However, there are differences in operating expenses, taxes
15 other than income, and PILT. (See Table MAS-1 on next page.)

Table MAS-1: Differences in *Pro Forma* Revenue Requirements

	Per Petitioner	Per OUCC	OUCC More (Less)
Operating Expenses	\$ 13,311,317	\$ 12,850,272	\$ (461,045)
Taxes other than Income	543,413	548,346	4,933
Depreciation Expense	3,043,118	3,043,118	-
Working Capital	-	-	-
Payment in Lieu of Taxes	992,990	904,765	(88,225)
Debt Service	5,173,267	5,173,267	-
Debt Service Reserve	-	-	-
Total Revenue Requirements	23,064,105	22,519,768	(544,337)
Less: Interest Income	(287,018)	(287,018)	-
Rental Income	(1,160)	(1,160)	-
Misc. Non-Operating Income	(23,406)	(23,406)	-
<i>Pro forma</i> Net Revenue Requirements	<u>\$ 22,752,521</u>	<u>\$ 22,208,184</u>	<u>\$ (544,337)</u>

IV. Revenue Adjustments

Q: What adjustments to test year revenue did Petitioner propose?

A: Petitioner made several *pro forma* adjustments that resulted in an overall increase of \$234,413 to operating revenues. Those adjustments included normalization of test year growth in residential and commercial water revenues, normalization of the fire protection surcharge, and reimbursement of joint costs from the Evansville Municipal Sewer Utility and Vanderburgh County.

Q: Did you accept any of Petitioner's revenue adjustments?

A: Yes, I accepted all of Petitioner's revenue adjustments discussed above and agree with Petitioner's calculation of total *pro forma* present rate revenues of \$16,105,708.

V. Operating Expense Adjustments

Q: Did you accept any of Petitioners's operating expense adjustments?

A: Yes. As shown in the table below (Table MAS-2), I accepted Petitioner's adjustments for salaries and wages, PERF contributions, employee health insurance, and worker's compensation insurance. I also accepted Petitioner's adjustments for liability insurance and IDEM fees. However, I proposed modifications to Petitioner's adjustments for maintenance expense, contractual services, non-recurring expenses, and the Teamsters' scholarship fund expense. Finally, I proposed an additional adjustment for property taxes Petitioner paid during the test year.

Table MAS-2: Differences in Adjustments to *Pro Forma* Operating Expenses

	<u>Per Petitioner</u>	<u>Per OUCC</u>	<u>OUCC More (Less)</u>
O&M Expense			
Salaries & Wages	\$ 266,966	\$ 266,966	\$ -
PERF	48,499	48,499	-
Health & Life Insurance	102,092	102,090	(2)
Workman's Comp Insurance	3,313	3,313	-
Teamster's Scholarship Fund	(218)	(114)	104
Maintenance	353,007	250,507	(102,500)
Non-recurring Expenses	(288,861)	(316,499)	(27,638)
Contractual Services	1,268,699	938,694	(330,005)
Liability Insurance	17,303	17,305	2
IDEM Fee	(36,237)	(36,237)	-
Property Tax	-	(1,006)	(1,006)
	<u>\$ 1,734,563</u>	<u>\$ 1,273,518</u>	<u>\$ (461,045)</u>

Q: Please explain your proposed adjustment to Petitioner's Teamster's Scholarship Fund expense.

A: *Pro forma* salaries and wages have been calculated based upon 83 employees, 77 of which are union employees subject to the Teamster's Scholarship Fund expense.

Petitioner's adjustment is based upon 76 union employees. The annual expense per union employee is \$104, or \$8,008 for 77 employees. Schedule 6, Adjustment 6 yields a *pro forma* decrease of \$114 to that test year operating expense.

Q: Please explain the changes you made to Petitioner's proposed maintenance expense adjustment.

A: During the test year, most periodic maintenance expenses were included in the management fees paid to EA2/American Water under the Operations Management Contract. Under that agreement, any maintenance expense that was less than \$10,000 per incident was included in the services EA2/American Water was required to provide (without any additional reimbursement) under the Operations Management Contract. Under the original agreement, Petitioner was required to pay any maintenance costs that exceeded \$10,000 per item.

However, in 2007 the EA2/American Water Operations Management Agreement was renegotiated. The agreement now states that maintenance expenses under \$5,000 are covered in the monthly management fee. As before, there is a ceiling for these costs and a true-up process if total costs are more or less than projected. Petitioner proposes adjustments to test year operating expenses to include additional periodic maintenance expenses for pump maintenance, booster station maintenance, filter media replacement, tank cleaning and tank painting. I made three amendments to those proposed maintenance expenses. First, I eliminated expenses related to pump maintenance since those maintenance costs should be less than \$5,000 per pump and, therefore, already covered in monthly management fees. I also eliminated expenses for booster station maintenance for the same reason – *i.e.*, individual expenses would be less than \$5,000. Finally, I adjusted tank painting expenses. I added an allowance for future painting of the

new tank Petitioner plans to construct as part of its proposed operating projects. I also amortized all tank painting expenses over fifteen years, rather than the ten years proposed by Petitioner. The Prefiled Testimony OUCC Witness, Mr. Roger Pettijohn, provides further support for the OUCC's proposed use of a fifteen-year tank painting amortization period. After netting the above adjustments, I recommend a \$250,507 *pro forma* increase to Petitioner's test year maintenance expenses (OUCC Schedule 6, Adjustment 7).

Q: Please explain your proposed amendment to Petitioner's adjustment to total test year non-recurring operating expenses.

A: Petitioner proposed a \$288,861 reduction to its test year non-recurring expenses. Although I agreed with everything in Petitioner's proposed adjustment, I found an additional \$27,638 in non-recurring expenses that should be eliminated from Petitioner's test year operating expenses. Following is a break-down of the additional \$27,638 that should be removed from Petitioner's test year operating expenses:

Hinderliter Environmental	Removal of fuel tanks	\$ 1,248
Annette Wright	Contract Employee	898
CSX Transportation	Encroachment inventory fee	500
CSX Transportation	Duplicate annual fee	6,380
ESRI	Duplicate annual license fee	18,112
NASCIO	Duplicate annual dues	<u>500</u>
		<u>\$ 27,638</u>

In summary, after netting all of the above OUCC test year operating expense adjustments, I recommend a \$316,499 *pro forma* decrease to Petitioner's total test year operating expenses (Schedule 6, Adjustment 8).

Q: Please explain your proposed change to Petitioner's contractual services expense adjustment.

A: After reviewing pertinent contracts and test year expenses, I agreed with all of the *pro forma* adjustments in this category, except for a minor change to Petitioner's proposed *pro forma* adjustment to management fees under the renegotiated Operations Management Contract. Under the renegotiated agreement, the annual fee paid to American Water includes certain amounts for purchased power and chemical costs. The current agreement shows the following projected amounts already included in the annual management fee:

Chemicals	\$1,024,023
Electric	900,000
Natural Gas	47,700

The current agreement allows for a quarterly true-up if actual costs are less than projected costs. In its discovery responses, Petitioner provided the following test year expense figures:

Chemicals	\$ 667,179
Electric	844,768
Natural Gas	30,007

Although electric and natural gas costs appear to be reasonable projections, chemical costs are projected to increase \$356,844 over test year, a 53.4% increase. Petitioner offered no evidence to suggest that its chemical costs would increase by the magnitude indicated above; so I proposed a further \$330,000 reduction to test year management fees to adjust for anticipated chemical cost true-ups. Taking all adjustments to test year operating expenses into account, I recommend a \$938,694 *pro forma* increase to test year operating expenses (OUCC Schedule 6, Adjustment 9).

1 **Q: Please explain your adjustment eliminating test year property tax expense.**

2 A: During the test year, Petitioner paid \$1,006 in property taxes on utility property. As a
3 municipal utility, Petitioner is exempt from paying property taxes per Ind. Code § 6-1.1-
4 10-5. Schedule 6, Adjustment 15 yields a *pro forma* decrease of \$1,006 to test year
5 operating expenses.

6 **VI. Adjustments to Taxes Other than Income Tax**

7 **Q: What adjustments to test year taxes other than income tax did Petitioner propose?**

8 A: Petitioner proposed adjustments to FICA, PILT, and URT.

9 **Q: Did you accept any of Petitioner's adjustments for taxes other than income tax?**

10 A: Yes. I accepted Petitioner's FICA adjustment.

11 **Q: Please explain your amendments to Petitioner's PILT adjustment.**

12 A: I agreed with most of Petitioner's PILT calculation. However, my analysis differed on
13 two points. First, Petitioner included additional plant in Phases II and III, but neglected
14 to update accumulated depreciation. Second, in Phase II Petitioner did not update the
15 offset used for plant located outside of the city. Schedule 6, Adjustment 13 yields an
16 overall *pro forma* increase of \$352,971 to test year taxes other than income tax.

17 **Q: Please explain your amendments to Petitioner's URT adjustment.**

18 A: I basically agreed with Petitioner's calculation of URT, with one exception. Sales for
19 resale are exempt from the URT and should not be included in revenue when calculating
20 Petitioner's *pro forma* URT expense. Schedule 6, Adjustment 14 yields an overall *pro*
21 *forma* increase of \$83,200 to test year taxes other than income tax.

VII. Depreciation Expense

Q: Did petitioner request extensions and replacements ("E&R") as part of its revenue requirements?

A: No. Petitioner has requested depreciation expense instead of E&R. As a municipal utility, this is an allowable revenue requirement and does not require support. However, Petitioner provided a ten-year master plan as part of its evidence in this case. The master plan shows that Petitioner has considered its needs and future system requirements and has plans on how it will spend depreciation funds recovered in rates.

Q: Does the OUCC agree with Petitioner's calculation of its depreciation expense revenue requirement?

A: Yes. Petitioner's calculation of depreciation is reasonable, applying a 2% composite depreciation rate, as ordered in Cause No. 42176. Schedule 6, Adjustment 12 yields an overall *pro forma* increase of \$1,074,237 to test year depreciation expense.

VIII. Working Capital

Q: Did Petitioner request working capital as part of its revenue requirements?

A: No. As demonstrated on Schedule 7, Petitioner had sufficient cash reserves on hand at the end of the test year and therefore does not need any additional working capital.

IX. Debt Service

Q: Does the OUCC agree with Petitioner's proposed debt financing and debt service revenue requirements?

A: Yes. The OUCC believes that Petitioner's proposed financing is a reasonable method to fund its proposed capital improvement projects and that Petitioner should be permitted to

1 proceed with its financing plans. The OUCC also accepts Petitioner's proposed debt
2 amortization schedule.¹

3 **Q: Is the OUCC proposing a true-up once the debt is issued?**

4 A: Yes. The OUCC proposes that a true-up process be implemented after Petitioner issues
5 its debt to adjust for any differences. Petitioner should be required to file with the
6 Commission, within 30 days after issuance of the debt, a report indicating the actual
7 interest rate and amount borrowed, along with an updated amortization schedule. If the
8 amortization schedule is materially different from that provided in this cause, Petitioner
9 should promptly file a revised tariff with the Commission, incorporating any rate changes
10 required under the true-up process.

11 **X. Conclusion**

12 **Q: Please summarize your recommendations.**

13 A: Petitioner should be allowed to increase its rates in three phases as requested – with a
14 12.10% increase in Phase I, another 16.8% increase in Phase II, and a final 9.6% increase
15 in Phase III -- yielding a total overall rate increase of 43.5%. Further, I recommend that
16 the Commission order Petitioner to provide a true-up report within 30 days of issuing
17 debt and, in the event of any material differences, Petitioner should promptly file a
18 revised tariff with the Commission to give effect to changes identified in the true-up
19 process.

20 **Q: Does this conclude your testimony?**

21 A: Yes.

¹ Note that Petitioner is not requesting debt service reserve as part of its revenue requirement, since any required reserve will be included in the amount being financed.

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

**Comparison of Petitioner's and OUCC's
Revenue Requirements**

	Overall Cumulative Rate Increase			
	As Requested By Petitioner	Per OUCC	Sch Ref	OUCC More (Less)
Operating Expenses	\$ 13,311,317	\$ 12,850,272	4	\$ (461,045)
Taxes other than Income	543,413	548,346	4	4,933
Depreciation Expense	3,043,118	3,043,118	4	-
Working Capital	-	-	7	-
Payment in Lieu of Taxes	992,990	904,765	4	(88,225)
Debt Service	5,173,267	5,173,267	8	-
Debt Service Reserve	-	-		-
Total Revenue Requirements	23,064,105	22,519,768		(544,337)
Less: Interest Income	(287,018)	(287,018)	Pet	-
Rental Income	(1,160)	(1,160)	Pet	-
Misc. Non-Operating Income	(23,406)	(23,406)	Pet	-
Add: Other Expenses				
Net Revenue Requirements	22,752,521	22,208,184		(544,337)
Less: Revenues at current rates subject to increase	(13,283,734)	(13,283,734)	4	-
Other revenues at current rates	(2,821,974)	(2,821,974)	4	-
Net Revenue Increase Required	6,646,813	6,102,476		(544,337)
Less: Revenues not requested	(868,078)	-		868,078
Recommended Increase	<u>\$ 5,778,735</u>	<u>\$ 6,102,476</u>		<u>\$ 323,741</u>
Requested Percentage Increase	<u>43.50%</u>	<u>45.94%</u>		<u>2.44%</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

**Comparison of Petitioner's and OUCC's
Revenue Requirements**

	Phase I				Phase II				Phase III			
	Per Petitioner	Per OUCC	Sch Ref	OUCC More (Less)	Per Petitioner	Per OUCC	Sch Ref	OUCC More (Less)	Per Petitioner	Per OUCC	Sch Ref	OUCC More (Less)
Operating Expenses	\$ 13,311,317	\$ 12,850,272	4	\$ (461,045)	\$ 13,311,317	\$ 12,850,272	4	\$ (461,045)	\$ 13,311,317	\$ 12,850,272	4	\$ (461,045)
Taxes other than Income	465,146	466,051	4	905	487,602	493,226	4	5,624	521,073	526,120	4	5,047
Depreciation Expense	2,062,300	2,062,300	6-12	-	2,426,996	2,426,996	4	-	3,043,118	3,043,118	6-12	-
Working Capital	-	-	7	-	-	-	7	-	-	-	7	-
Payment in Lieu of Taxes	514,408	514,408	6-13	-	702,956	639,826	4	(63,130)	992,990	904,765	6-13	(88,225)
Debt Service	2,512,234	2,512,234	8	-	4,428,417	4,428,417	8	-	5,173,267	5,173,267	8	-
Debt Service Reserve	-	-		-	-	-		-	-	-		-
Total Revenue Requirements	18,865,405	18,405,265		(460,140)	21,357,288	20,838,737		(518,551)	23,041,765	22,497,542		(544,223)
Less: Interest Income	(287,018)	(287,018)	Pet	-	(287,018)	(287,018)	Pet	-	(287,018)	(287,018)	Pet	-
Rental Income	(1,160)	(1,160)	Pet	-	(1,160)	(1,160)	Pet	-	(1,160)	(1,160)	Pet	-
Misc. Non-Operating Income	(23,406)	(23,406)	Pet	-	(23,406)	(23,406)	Pet	-	(23,406)	(23,406)	Pet	-
Net Revenue Requirements	18,553,821	18,093,681		(460,140)	21,045,704	20,527,153		(518,551)	22,730,181	22,185,958		(544,223)
Less: Revenues at current rates subject to increase	(13,283,734)	(13,283,734)	4	-	(14,891,065)	(15,298,882)	4	(407,817)	(17,392,764)	(17,738,073)	4	(345,309)
Other revenues at current rates	(2,821,974)	(2,821,974)	4	-	(2,821,974)	(2,821,974)	4	-	(2,821,974)	(2,821,974)	4	-
Net Revenue Increase Required	2,448,113	1,987,973		(460,140)	3,332,665	2,406,297		(926,368)	2,515,443	1,625,911		(889,532)
Add: Additional Utility Receipts Tax	22,456	27,175	6-14	4,719	33,471	32,894	4	(577)	22,340	22,226	6-14	(114)
Recommended Increase	\$ 2,470,569	\$ 2,015,148		\$ (455,421)	\$ 3,366,136	\$ 2,439,191		\$ (926,945)	\$ 2,537,783	\$ 1,648,137		\$ (889,646)
Recommended Percentage Increase	18.60%	15.17%		-3.43%	22.61%	15.94%		-6.66%	14.59%	9.29%		-5.30%
Requested Increase	\$ 1,607,332	\$ 2,015,148		\$ 407,816	\$ 2,501,699	\$ 2,439,191		\$ (62,508)	\$ 1,669,705	\$ 1,648,137		\$ (21,568)
Requested Percentage Increase	12.10%	15.17%		3.07%	16.80%	15.94%		-0.86%	9.60%	9.29%		-0.31%

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

**Reconciliation of Net Operating Income Statement Adjustments
Pro-forma Present Rates**

	Phase I			Phase II			Phase III		
	Per Petitioner	Per OUCC	OUCC More (Less)	Per Petitioner	Per OUCC	OUCC More (Less)	Per Petitioner	Per OUCC	OUCC More (Less)
Operating Revenues									
Residential Water Sales	\$ 30,761	\$ 30,761	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial and Industrial Water Sales	17,902	17,902	-	-	-	-	-	-	-
Sales for Resale	-	-	-	-	-	-	-	-	-
Fire Protection	18,317	18,317	-	-	-	-	-	-	-
Penalties	-	-	-	-	-	-	-	-	-
Other	37,387	37,387	-	-	-	-	-	-	-
Sewer Utility Portion of General Expenses	130,046	130,046	-	-	-	-	-	-	-
Total Operating Revenues	234,413	234,413	-	-	-	-	-	-	-
O&M Expense									
Salaries & Wages	266,966	266,966	-	-	-	-	-	-	-
PERF	48,499	48,499	-	-	-	-	-	-	-
Health & Life Insurance	102,092	102,090	(2)	-	-	-	-	-	-
Workman's Comp Insurance	3,313	3,313	-	-	-	-	-	-	-
Teamster's Scholarship Fund	(218)	(114)	104	-	-	-	-	-	-
Maintenance	353,007	250,507	(102,500)	-	-	-	-	-	-
Non-recurring Expenses	(288,861)	(316,499)	(27,638)	-	-	-	-	-	-
Contractual Services	1,268,699	938,694	(330,005)	-	-	-	-	-	-
Liability Insurance	17,303	17,305	2	-	-	-	-	-	-
IDEM Fee	(36,237)	(36,237)	-	-	-	-	-	-	-
Property Tax	-	(1,006)	(1,006)	-	-	-	-	-	-
Depreciation Expense	93,419	93,419	-	364,696	364,696	-	616,122	616,122	-
Taxes Other than Income									
Payroll Taxes	24,900	24,900	-	-	-	-	-	-	-
PILT	(37,386)	(37,386)	-	188,548	125,418	(63,130)	290,034	264,939	(25,095)
Utility Receipts Tax	-	905	905	33,471	32,894	(577)	22,340	22,226	(114)
Total Operating Expenses	1,815,496	1,355,355	(460,141)	586,715	523,008	(63,707)	928,496	903,287	(25,209)
Net Operating Income	\$ (1,581,083)	\$ (1,120,942)	\$ 460,141	\$ (586,715)	\$ (523,008)	\$ 63,707	\$ (928,496)	\$ (903,287)	\$ 25,209

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

COMPARATIVE BALANCE SHEET

ASSETS	As of May 31,	As of December 31,		
	2006	2005	2004	2003
Utility Plant:				
Utility Plant in Service	\$ 103,115,003	\$ 102,148,892	\$ 95,025,311	\$ 91,792,426
Land and Improvements to Land	387,100	387,100	387,100	387,100
Construction Work in Progress	7,822,782	6,877,921	5,996,293	1,943,086
Less: Accumulated Depreciation	(37,169,626)	(36,396,406)	(34,953,142)	(33,465,307)
Net Utility Plant in Service	<u>74,155,259</u>	<u>73,017,507</u>	<u>66,455,562</u>	<u>60,657,305</u>
Restricted Assets:				
Bond and Interest	1,238,689	1,845,756	1,869,850	1,032,066
Debt Service Reserve	39,426	39,426	1,134,006	1,134,006
Construction Fund -- Cash	10,412,000	11,378,000	17,922,289	-
Cash with Fiscal Agent	93,637	502,674	116,637	-
Customer Deposits	996,290	985,713	967,678	942,420
Service Charge due Petitioners	1,500	1,500	1,500	1,500
Deposits on New Extension Estimates	21,055	21,055	21,055	21,055
Retainage -- Cash	5,304	5,304	349,440	49,823
Interest Receivable	49,446	29,330	55,110	-
Total Restricted Assets	<u>12,857,347</u>	<u>14,808,758</u>	<u>22,437,565</u>	<u>3,180,870</u>
Current Assets:				
Operating Cash	3,273,336	3,787,404	3,385,725	1,238,823
Accounts Receivable	869,829	939,044	916,523	799,134
Interfund Receivable	493,679	490,585	313,261	267,622
Interest Receivable	25,996	836	1,878	1,034
Other Receivable	37,525	37,514	-	-
Advances for Bad Checks	214	3,448	6,570	5,008
Prepaid Insurance	427	67,909	66,389	56,984
Other Current Assets	-	-	-	-
Total Current Assets	<u>4,701,006</u>	<u>5,326,740</u>	<u>4,690,346</u>	<u>2,368,605</u>
Deferred Debits				
Bond Issuance Costs, net	682,415	701,618	647,338	172,304
Other Deferred Debits	177,754	222,813	366,579	472,271
Total Deferred Debits	<u>860,169</u>	<u>924,431</u>	<u>1,013,917</u>	<u>644,575</u>
Total Assets	<u>\$ 92,573,781</u>	<u>\$ 94,077,436</u>	<u>\$ 94,597,390</u>	<u>\$ 66,851,355</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

COMPARATIVE BALANCE SHEET

<u>LIABILITIES</u>	As of May 31,	As of December 31,		
	2006	2005	2004	2003
Equity	\$ 36,313,818	\$ 36,485,552	\$ 35,258,439	\$ 34,923,353
Contributions in Aid of Construction	20,504,914	19,888,930	19,065,249	18,266,320
Long-term Debt				
Bonds Payable	31,990,000	33,165,000	34,940,000	10,640,000
Unamortized Bond Premium	4,292	4,391	5,126	2,821
Deferred Loss on Early Retirement of Debt	(118,947)	(123,630)	-	-
Total Long-term Debt	<u>31,875,345</u>	<u>33,045,761</u>	<u>34,945,126</u>	<u>10,642,821</u>
Current Liabilities				
Accounts Payable	687,347	750,697	115,036	705,573
Taxes Payable	78,406	53,646	51,469	43,309
Accrued Payroll	163,693	150,779	170,150	116,528
Compensated Absences	97,141	97,141	70,679	75,626
Contracts Payable	-	432,317	1,782,443	218,322
Retainage Payable	98,940	507,978	466,077	49,823
Restricted Accounts:				
Customer Deposits Payable	996,290	985,713	967,678	942,420
Accrued Interest	560,332	686,367	602,489	284,705
Deposit on New Extension Estimates	21,055	21,055	21,055	21,055
Service Charge due Petitioners	1,500	1,500	1,500	1,500
Bonds Payable	<u>1,175,000</u>	<u>970,000</u>	<u>1,080,000</u>	<u>560,000</u>
Other Current Liabilities	<u>3,879,704</u>	<u>4,657,193</u>	<u>5,328,576</u>	<u>3,018,861</u>
Total Liabilities	<u>\$ 92,573,781</u>	<u>\$ 94,077,436</u>	<u>\$ 94,597,390</u>	<u>\$ 66,851,355</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

**COMPARATIVE INCOME STATEMENT
For the Twelve Months Ended**

	May 31, 2006	December 31,		
		2005	2004	2003
Operating Revenues				
Residential Water Sales	\$ 6,822,970	\$ 6,907,979	\$ 6,739,907	\$ 5,924,316
Commercial and Industrial Water Sales	4,409,600	4,356,957	4,236,811	3,744,764
Sales for Resale	488,092	480,623	555,702	438,441
Fire Protection	1,496,092	1,493,624	1,455,260	1,264,609
Penalties	107,638	106,958	107,598	100,998
Other	304,316	304,254	203,568	193,561
Sewer Utility Portion of General Expenses	2,242,587	2,225,868	1,625,100	1,551,761
Total Operating Revenues	15,871,295	15,876,263	14,923,946	13,218,450
Operating Expenses				
Salaries and Wages	3,388,725	3,314,261	3,227,164	3,135,213
Employee Benefits	1,198,938	1,320,517	1,070,842	1,035,894
Purchased Water	-	-	-	-
Purchased Power	-	-	-	-
Chemicals	-	-	-	-
Materials and Supplies	39,268	52,631	21,607	19,870
Management Fee	4,071,975	5,540,711	6,082,317	5,810,642
Contractual Services	2,259,648	671,844	356,125	352,451
Transportation Expense	-	7,181	5,154	4,753
Insurance	295,909	294,522	281,217	244,898
Bad Debt Expense	54,452	54,512	47,779	32,778
Rate Case Expense	57,192	-	-	-
Miscellaneous Expense	210,647	75,739	-	-
Total O&M Expense	11,576,754	11,331,918	11,092,205	10,636,499
Depreciation Expense	1,968,881	1,978,047	1,868,375	2,000,285
Taxes Other than Income	992,040	977,052	921,170	882,818
Total Operating Expenses	14,537,675	14,287,017	13,881,750	13,519,602
Net Of Net Operating Income	1,333,620	1,589,246	1,042,196	(301,152)
Other Income (Expense)				
Interest Income	225,705	198,472	70,655	63,748
Gain (Loss) on Sale of Assets	-	-	-	-
Other Income	60,192	47,079	52,865	182,059
Interest Expense	(346,747)	(517,648)	(539,493)	(570,060)
Amortization Expense	(182,344)	(195,785)	(293,665)	(310,093)
Other Expense	(46,679)	(32,547)	(27,155)	(43,832)
Total Other Income (Expense)	(289,873)	(500,429)	(736,793)	(678,178)
Net Income	\$ 1,043,747	\$ 1,088,817	\$ 305,403	\$ (979,330)

CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190

Pro-forma Net Operating Income Statement

	Year Ended 5/31/2006	Adjustments	Sch Ref	<i>Pro-forma</i> Present Rates	Adjustments	Sch Ref	Phase I <i>Pro-Forma</i> Proposed Rates
Operating Revenues							
Residential Water Sales	\$ 6,822,970	\$ 30,761	5-1	\$ 6,853,731	\$ 1,039,716	1	\$ 7,893,447
Commercial and Industrial Water Sales	4,409,600	17,902	5-2	4,427,502	671,652	1	5,099,154
Sales for Resale	488,092			488,092	74,044	1	562,136
Fire Protection	1,496,092	18,317	5-3	1,514,409	229,736	1	1,744,145
Penalties	107,638			107,638			107,638
Other	304,316	37,387	5-4	341,703			341,703
Sewer Utility Portion of General Expenses	2,242,587	130,046	5-5	2,372,633			2,372,633
Total Operating Revenues	<u>15,871,295</u>	<u>234,413</u>		<u>16,105,708</u>	<u>2,015,148</u>		<u>18,120,856</u>
O&M Expense	11,576,754			12,850,272			12,850,272
Salaries & Wages		266,966	6-1				
PERF		48,499	6-3				
Health & Life Insurance		102,090	6-4				
Workman's Comp Insurance		3,313	6-5				
Teamster's Scholarship Fund		(114)	6-6				
Maintenance		250,507	6-7				
Non-recurring Expenses		(316,499)	6-8				
Contractual Services		938,694	6-9				
Liability Insurance		17,305	6-10				
IDEM Fee		(36,237)	6-11				
Property Tax		(1,006)	6-15				
Depreciation Expense	1,968,881	93,419	6-12	2,062,300			2,062,300
Taxes Other than Income							-
Payroll Taxes	259,012	24,900	6-2	283,912			283,912
PILT	551,794	(37,386)	6-13	514,408			514,408
Utility Receipts Tax	181,234	905	6-14	182,139	27,175	6-14	209,314
Total Operating Expenses	<u>14,537,675</u>	<u>1,355,355</u>		<u>15,893,030</u>	<u>27,175</u>		<u>15,920,206</u>
Net Operating Income	<u>\$ 1,333,620</u>	<u>\$ (1,120,942)</u>		<u>\$ 212,678</u>	<u>\$ 1,987,973</u>		<u>\$ 2,200,650</u>

CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190

Pro-forma Net Operating Income Statement

	Phase I <i>Pro-Forma</i> Proposed Rates	Adjustments	Sch Ref	Phase II <i>Pro-forma</i> Proposed Rates	Adjustments	Sch Ref	Phase III <i>Pro-Forma</i> Proposed Rates
Operating Revenues							
Residential Water Sales	\$ 7,893,447	\$ 1,258,497	1	\$ 9,151,944	\$ 850,357	1	\$ 10,002,301
Commercial and Industrial Water Sales	5,099,154	812,989	1	5,912,143	549,327	1	6,461,470
Sales for Resale	562,136	89,625	1	651,761	60,558	1	712,319
Fire Protection	1,744,145	278,080	1	2,022,225	187,895	1	2,210,120
Penalties	107,638			107,638			107,638
Other	341,703			341,703			341,703
Sewer Utility Portion of General Expenses	2,372,633			2,372,633			2,372,633
Total Operating Revenues	<u>18,120,856</u>	<u>2,439,191</u>		<u>20,560,047</u>	<u>1,648,137</u>		<u>22,208,184</u>
O&M Expense	12,850,272			12,850,272			12,850,272
Salaries & Wages							
PERF							
Health & Life Insurance							
Workman's Comp Insurance							
Teamster's Scholarship Fund							
Maintenance							
Non-recurring Expenses							
Contractual Services							
Liability Insurance							
IDEM Fee							
Property Taxes							
Depreciation Expense	2,062,300	364,696	6-12	2,426,996	616,122	6-12	3,043,118
Taxes Other than Income							-
Payroll Taxes	283,912			283,912			283,912
PILT	514,408	125,418	6-13	639,826	264,939	6-13	904,765
Utility Receipts Tax	209,314	32,894	6-14	242,208	22,226	6-14	264,434
Total Operating Expenses	<u>15,920,206</u>	<u>523,008</u>		<u>16,443,214</u>	<u>903,287</u>		<u>17,346,501</u>
Net Operating Income	<u>\$ 2,200,650</u>	<u>\$ 1,916,183</u>		<u>\$ 4,116,833</u>	<u>\$ 744,850</u>		<u>\$ 4,861,683</u>

(1)

To normalize residential customer growth within the test year.

Average Bill (Sales / # of Customers)	\$ 9.92
Additional Residential Billings	<u>3,101</u>
Adjustment - Increase	\$ 30,761

(2)

To normalize commercial customer growth within the test year.

		Billings	Growth	# of Bills	Additional Bills	Average Bill	Adjustment
June	2005	2,137					
July		2,151	14	1	14	102.30	1,432
August		2,159	8	2	16	102.30	1,637
September		2,158	(1)	3	(3)	102.30	(307)
October		2,174	16	4	64	102.30	6,547
November		2,177	3	5	15	102.30	1,535
December		2,176	(1)	6	(6)	102.30	(614)
January	2006	2,168	(8)	7	(56)	102.30	(5,729)
February		2,168	-	8	-	102.30	-
March		2,174	6	9	54	102.30	5,524
April		2,174	-	10	-	102.30	-
May		2,181	7	11	77	102.30	7,877
		<u>25,997</u>	<u>44</u>		<u>175</u>		<u>\$ 17,902</u>
							Adjustment - Increase
							\$ 17,902

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Revenue Adjustments

(3)

Fire Protection Normalization

To normalize customer growth within the test year for fire protection revenues

	# of Meters	Surcharge	Monthly Revenue	Annual Revenue	
<i>Inside City Limits:</i>					
5/8 inch meter	39,589	\$ 1.23	48,694	584,328	
1 inch meter	1,227	\$ 1.71	2,098	25,176	
1 1/2 inch meter	67	\$ 2.19	147	1,764	
2 inch meter	1,062	\$ 3.53	3,749	44,988	
3 inch meter	88	\$ 13.37	1,177	14,124	
4 inch meter	212	\$ 17.06	3,617	43,404	
6 inch meter	61	\$ 25.57	1,560	18,720	
	<u>42,306</u>		<u>61,042</u>	<u>732,504</u>	
Less: Test Year Revenues				<u>(744,111)</u>	(11,607)
<i>Inside City Limits:</i>					
5/8 inch meter	16160	\$ 2.47	39,915	478,980	
1 inch meter	1007	\$ 3.36	3,384	40,608	
1 1/2 inch meter	3	\$ 4.50	14	168	
2 inch meter	340	\$ 6.75	2,295	27,540	
3 inch meter	11	\$ 26.97	297	3,564	
4 inch meter	55	\$ 34.84	1,916	22,992	
6 inch meter	27	\$ 51.69	1,396	16,752	
	<u>17,603</u>		<u>49,217</u>	<u>590,604</u>	
Less: Test Year Revenues				<u>(580,903)</u>	9,701
<i>Flat Rate Sprinklers:</i>					
1 inch meter	4	\$ 1.92		8	
2 inch meter	13	\$ 10.64		138	
3 inch meter	1	\$ 29.43		29	
4 inch meter	130	\$ 60.29		7,838	
6 inch meter	368	\$ 166.06		61,110	
8 inch meter	208	\$ 340.96		70,920	
10 inch meter	8	\$ 595.53		4,764	
12 inch meter	31	\$ 939.49		29,124	
	<u>763</u>			<u>173,931</u>	
Less: Test Year Revenues				<u>(153,708)</u>	20,223
Adjustment - Increase					<u>\$ 18,317</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Revenue Adjustments

(4)

County Reimbursement of GIS Expenses

To adjust the test year for the reimbursement from the County for its pro forma portion of shared GIS expenses per utility's proposed budget.

2007 Budget GIS Expenses	\$ 1,666,289	
Times: County's share of expenses	<u>16.292%</u>	
<i>Pro forma</i> reimbursement from County		271,470
Less: Test Year Reimbursement		<u>(234,083)</u>
Adjustment - Increase		<u>\$ 37,387</u>

(5)

Reimbursement of Joint Costs

To adjust the test year for the reimbursement from the sewer utility for its pro forma portion of shared billing and general expenses per Utility's proposed budget.

2007 Budgeted Joint Expenses	\$ 4,745,265	
Times: Sewer's share of expenses	<u>50.00%</u>	
<i>Pro forma</i> reimbursement from County		2,372,633
Less: Test Year Reimbursement		<u>(2,242,587)</u>
Adjustment - Increase		<u>\$ 130,046</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(1)

Salaries and Wages

To adjust test year expense to include 3% salary increase, one new employee, and the minimum union employees per union contract.

2007 Salary Increase:

<i>Pro forma</i> Salaries and Wages	\$ 3,655,691
Less: Test Year Salaries and Wages	<u>(3,388,725)</u>

Adjustment - Increase	\$ <u>266,966</u>
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(2)

FICA

To adjust test year FICA expense to reflect *pro forma* payroll expense.

<i>Pro forma</i> Salaries and Wages	3,655,691	
Times: FICA rate	<u>7.65%</u>	
<i>Pro forma</i> FICA Expense		279,660
Less: Test Year FICA Expense		<u>(254,760)</u>

Adjustment - Increase	\$ <u>24,900</u>
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(3)

PERF

To adjust test year PERF expense to reflect *pro forma* payroll expense.

<i>Pro forma</i> Salaries and Wages	\$ 3,655,691	
Less: Board Member Salaries not subject to PERF	<u>(19,675)</u>	
<i>Pro forma</i> Salaries and Wages subject to PERF	3,636,016	
Times: PERF Rate	<u>9.25%</u>	
<i>Pro forma</i> PERF Expense		336,331
Less: Test Year PERF Expense		<u>(287,832)</u>

Adjustment - Increase	\$ <u>48,499</u>
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**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(4)

Health and Life Insurance

To adjust test year expense to reflect *pro forma* health and life insurance expense per 2007 City Budget.

<u>Department</u>	<u>2007 City Budget</u>		
	<u>Health</u>	<u>Life</u>	<u>Total</u>
Processing & Treatment	155,796	1,625	157,421
Distribution	323,577	3,375	326,952
Meter Service	359,530	3,750	363,280
Planning	83,890	875	84,765
Administration	71,906	750	72,656
Total Annual Premiums	994,699	10,375	1,005,074
Less: Test Year Expense			<u>(902,984)</u>

Adjustment - Increase

\$ 102,090

(5)

Workman's Compensation Insurance

To adjust test year expense to reflect *pro forma* workman's compensation insurance expense per 2007 City Budget

<u>Department</u>	<u>2007 City Budget</u>
Processing & Treatment	7,620
Distribution	16,501
Meter Service	17,030
Planning	4,589
Accounting & General	<u>344</u>
Total Annual Premiums	46,084
Less: Test Year Expense	<u>(42,771)</u>

Adjustment - Increase

\$ 3,313

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(6)

Teamster's Scholarship Fund

To adjust test year expense to reflect *pro forma* teamster's scholarship fund expense per the teamster's contract and Utility Budget.

Scholarship Fund Donation per pay period	\$	2.00	
Times: Number of Pay periods		52	
Annual Scholarship Fund Donation per employee			104 (a)
Total Employees		83	
Less: Non-Union Admin Employees		(6)	
Total Union Employees			77 (b)
Pro forma annual scholarship fund expense (a) x (b)	\$	8,008	
Less: Test Year Expense		(8,122)	
Adjustment - Decrease			\$ (114)

(7)

Periodic Maintenance

To adjust test year expense to reflect *pro forma* periodic maintenance expense per utility management.

Filter Media Replacement	\$7,000 x 22 filters over 3 years		51,333
Reservoir Sealing	\$14,600 every 10 years		1,460
Tank Maintenance			
Cleaning and Inspection	\$34,000 for 7 tanks; 2 per year		9,714
Tank Painting			
Lincoln Ave.	\$235,000 every 15 years	500,000 gal.	15,667
Volkman	\$750,000 every 15 years	1,500,000 gal.	50,000
Darmstadt	\$465,000 every 15 years	1,000,000 gal.	31,000
Killian Reservoir	\$455,000 every 15 years	4,000,000 gal.	30,333
Upper Mt. Vernon	\$250,000 every 15 years	500,000 gal.	16,667
Grim Road	\$200,000 every 15 years	500,000 gal.	13,333
New Tank	\$465,000 every 15 years	1,000,000 gal.	31,000
			188,000
<i>Pro forma</i> periodic maintenance			250,507
Less: Test Year maintenance expense			-
Adjustment - Increase			\$ 250,507

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(8)

Non-Recurring Items

To eliminate expenditures that are considered non-recurring in nature.

07/2005	Hinderliter Environmental	Removal of fuel tanks	(11,035)	
02/2006	Hinderliter Environmental	Removal of fuel tanks	(4,108)	
02/2006	Hinderliter Environmental	Removal of fuel tanks	(2,232)	
02/2006	Hinderliter Environmental	Removal of fuel tanks	(1,248)	
02/2006	Hinderliter Environmental	Removal of fuel tanks	(886)	
03/2006	Hinderliter Environmental	Removal of fuel tanks	(1,248)	(20,757)
03/2006	R.W. Armstrong	EA2 contract review	(5,020)	
04/2006	R.W. Armstrong	EA2 contract review	(13,564)	
05/2006	R.W. Armstrong	EA2 contract review	(6,516)	(25,100)
11/2005	City of Evansville	Legal Settlement		(210,000)
Various	Annette Wright	Contract Employee		(898)
02/2006	CSX Transportation	Encroachment inventory fee		(500)
06/2005	CSX Transportation	Annual Fee paid twice during test year		(6,380)
06/2005	ESRI	Annual license fee paid twice during test year		(18,112)
08/2005	NASCIO	Annual dues paid twice during test year		(500)
03/2006	Umbaugh	Rate Case		(26,800)
04/2006	Dave Hicks Auto Collision	Employee Vehicle Repairs		(7,452)
Adjustment - Decrease				\$ (316,499)

(9)

Contractual Services

To adjust test year expense to reflect *pro forma* contractual services expense, per agreements and utility management.

(A) Pro forma Operations Management contract with American Water, Inc.

Base Fee	3,194,071	
Add: Estimated Electric	900,000	
Estimated Gas	47,700	
Estimated Chemicals	1,024,023	
Less: True-up of Chemical Costs	(330,000)	
<i>Pro forma</i> expense		4,835,794
Less: Test Year Expense		(3,981,914)
		853,880

(B) Pro forma Reimbursement of Security System expenses to American Water

Current Billings (monthly)	\$ 6,205	
Times: 12 months	x 12	
<i>Pro forma</i> Expense		74,460
Less: Test Year Expense		(62,053)
		12,407

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(9)

Contractual Services, continued

(C) Pro forma operating and maintenance contract with Environmental Management Corporation

Customer Service and Billing fees	\$	83,626	
Utility Planning and Engineering Fees		55,131	
Monthly Expense		138,757	
Times: 12 months		x 12	
			1,665,084
Times: Minimum CPI Adjustment			x 103%
			1,715,037
			(1,625,785)
			89,252

(D) Pro forma GIS contractual services with Mark Rolley Consulting.

Current Billings (bi-weekly)	\$	12,500	
Times: 26 weeks		x 26	
Pro forma Expense			325,000
Less: Test Year Expense			(324,372)
			628

(E) Pro forma GIS internet contract with SBC

Current Billings (monthly)	\$	2,082	
Times: 12 months		x 12	
Pro forma Expense			24,984
Less: Test Year Expense			(19,388)
			5,596

(F) Pro forma Security Services contracts with Sonitrol and ESRI.

Sonitrol Current Billings	\$	16,752	
ESRI Current Billings		17,825	
Pro forma Expense			34,577
Less: Test Year Expense			(41,086)
			(6,509)

(G) Eliminate contractual services expense for contract employee (Greg Server)

(16,560)

Adjustment - Increase

\$ 938,694

CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190

Expense Adjustments

(10)

Liability Insurance

To adjust test year expense to reflect *pro forma* general liability and automobile insurance expense per 2007 City budget

Projected Annual Premium - Total City	\$ 1,890,774	
Times: Allocation Percentage	<u>14.30%</u>	
<i>Pro forma</i> general liability and automobile insurance expense		\$ 270,443
Less: Test Year Expense		<u>(253,138)</u>
Adjustment - Increase		<u>\$ 17,305</u>

(11)

IDEM Fee

To adjust test year expense to reflect *pro forma* IDEM fee expense. During the test year, two annual fee payments were made.

Number of customer connections at 5/31/06	59,774	
Times: Annual fee per connection	<u>\$ 0.95</u>	
<i>Pro forma</i> Idem fee expense		56,785
Less: Test Year IDEM fee expense		<u>(93,022)</u>
Adjustment - Decrease		<u>\$ (36,237)</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(12)

Depreciation Expense

To adjust test year expense to reflect *pro forma* depreciation expense.

	Phase I	Phase II	Phase III
Utility Plant In Service at 5/31/06	103,502,103	103,502,103	103,502,103
Add: CWIP at 5/31/06	-	7,822,782	7,822,782
Balance of 2004 Bond Proceeds	-	10,412,000	10,412,000
Proposed Capital Improvement Plan	-	-	30,806,100
Less: Land	(387,100)	(387,100)	(387,100)
Depreciable Utility Plant in Service	103,115,003	121,349,785	152,155,885
Times: Composite Depreciation Rate	2.00%	2.00%	2.00%
Pro forma depreciation expense	2,062,300	2,426,996	3,043,118
Less: Test Year Depreciation Expense	(1,968,881)	(2,062,300)	(2,426,996)
Adjustment - Increase (Decrease)	\$ 93,419	\$ 364,696	\$ 616,122

(13)

PILT

To adjust test year expense to reflect *pro forma* allowance for payments in lieu of taxes.

	Phase I	Phase II	Phase III
Capital assets in service at 5/31/06	\$ 103,502,097	\$ 103,502,097	\$ 103,502,097
Add: CWIP at 5/31/06		7,822,782	7,822,782
Balance of 2004 Bond Proceeds		10,412,000	10,412,000
Proposed Projects			30,806,100
Less: Accumulated Depreciation	(37,169,626)	(39,231,926)	(41,658,922)
Estimated Net Assessed Value	66,332,471	82,504,953	110,884,057
Less: Estimated capital assets not within corporate limits (25%)	(16,583,118)	(20,626,238)	(23,382,614)
Capital assets subject to PILT	49,749,353	61,878,715	87,501,443
Times: Corporate tax rate per \$100 (net of PTRC - 12.3%)	1.034	1.034	1.034
<i>Pro forma</i> PILT	514,408	639,826	904,765
Less: Test Year PILT	(551,794)	(514,408)	(639,826)
Adjustment - Increase (Decrease)	\$ (37,386)	\$ 125,418	\$ 264,939

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Expense Adjustments

(14)

Utility Receipts Tax

To provide for utility receipts tax due on test year gross receipts.

Phase I				
	Pro Forma Present Rates	Pro Forma Proposed Rates	Phase II	Phase III
Pro Forma Present Rates gross receipts	\$ 16,105,708	\$ 18,120,856	\$ 20,560,047	\$ 22,208,184
Less: Exempt receipts -- Sales for Resale	(488,092)	(562,136)	(651,761)	(712,319)
County Reimbursement of GIS Costs	(234,083)	(234,083)	(234,083)	(234,083)
Sewer Reimbursement of Joint Costs	(2,372,633)	(2,372,633)	(2,372,633)	(2,372,633)
Annual taxpayer deduction per IDR	(1,000)	(1,000)	(1,000)	(1,000)
Total taxable receipts	13,009,900	14,951,004	17,300,570	18,888,149
Utility receipts tax Rate	1.40%	1.40%	1.40%	1.40%
<i>Pro forma</i> Utility Receipts Tax Expense	182,139	209,314	242,208	264,434
Less Test Year Expense	(181,234)	(182,139)	(209,314)	(242,208)
Adjustment - Increase	\$ 905	\$ 27,175	\$ 32,894	\$ 22,226

(15)

Property Tax Expense

To eliminate property tax expense paid during the test year since Petitioner is exempt from property tax payments.

Property Tax paid during test year \$ (1,006)

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Working Capital

Operation & Maintenance Expense	\$ 12,850,272
Less: Purchased Water	-
Purchased Power	-
Rate Case Expense Amortization	-
	<hr/>
Adjusted Operation & Maintenance Expense	12,850,272
Times: 45 Day Factor	0.125
	<hr/>
Working Capital Revenue Requirement	1,606,284
Less: Cash on Hand	3,273,336
	<hr/>
Net Working Capital Revenue Requirement	-
Divide by: Amortization Period (Years)	3
	<hr/>
Annual Working Capital Revenue Requirement	\$ -
	<hr/>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Debt Service

	Phase I 2008	Phase II 2009	Phase III 5-yr Avg.
2004 Bonds	1,540,156.00	\$ 1,532,769	\$ 1,528,380
2005 Bonds	972,078.00	975,928	987,997
Proposed Bonds		1,919,720	2,656,890
	<u>2,512,234.00</u>	<u>\$ 4,428,417</u>	<u>\$ 5,173,267</u>
	2004 Bonds	2005 Bonds	Proposed Bonds
2010	1,534,376	982,203	2,654,721
2011	1,528,894	987,123	2,654,955
2012	1,527,144	985,263	2,663,303
2013	1,523,144	990,923	2,659,020
2014	1,528,344	994,473	2,652,455
	<u>7,641,902</u>	<u>4,939,985</u>	<u>13,284,454</u>
Divide by 5 years	<u>5</u>	<u>5</u>	<u>5</u>
Average Annual Debt Service	<u>\$ 1,528,380</u>	<u>\$ 987,997</u>	<u>\$ 2,656,890</u>

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Debt Service

	2004 Bonds	2005 Bonds	Proposed Bonds	Total Debt Service
07.01.07	510,378.14	143813.75		
01.01.08	1,030,378.14	828813.75		2,513,383.78
07.01.08	502,578.14	133538.75	959,860.25	
01.01.09	1,037,578.14	838538.75	959,860.25	4,431,954.28
07.01.09	493,884.39	122963.75	959,860.25	
01.01.10	1,038,884.39	852963.75	959,860.25	4,428,416.78
07.01.10	484,688.21	111101.25	959,860.25	
01.01.11	1,049,688.21	871101.25	1,694,860.25	5,171,299.42
07.01.11	474,446.88	98561.25	942,477.50	
01.01.12	1,054,446.88	888561.25	1,712,477.50	5,170,971.26
07.01.12	463,571.88	85,131.25	924,151.50	
01.01.13	1,063,571.88	900,131.25	1,739,151.50	5,175,709.26
07.01.13	451,571.88	70,461.25	904,510.00	
01.01.14	1,071,571.88	920,461.25	1,754,510.00	5,173,086.26
07.01.14	439,171.88	54,736.25	883,727.50	
01.01.15	1,089,171.88	939,736.25	1,768,727.50	5,175,271.26
07.01.15	426,171.88	37,700.00	861,779.50	
01.01.16	1,096,171.88	957,700.00	1,791,779.50	5,171,302.76
07.01.16	412,771.88	19,300.00	838,529.50	
01.01.17	1,107,771.88	984,300.00	1,808,529.50	5,171,202.76
07.01.17	398,871.88		813,988.50	
01.01.18	2,288,871.88		1,673,988.50	5,175,720.76
07.01.18	361,071.88		792,058.50	
01.01.19	2,341,071.88		1,677,058.50	5,171,260.76
07.01.19	318,996.88		769,314.00	
01.01.20	2,388,996.88		1,694,314.00	5,171,621.76
07.01.20	272,421.88		745,356.50	
01.01.21	2,442,421.88		1,715,356.50	5,175,556.76
07.01.21	223,596.88		720,088.00	
01.01.22	2,498,596.88		1,730,088.00	5,172,369.76
07.01.22	172,409.38		693,525.00	
01.01.23	2,557,409.38		1,748,525.00	5,171,868.76
07.01.23	118,746.88		665,620.25	
01.01.24	2,623,746.88		1,765,620.25	5,173,734.26
07.01.24	60,818.75		636,305.25	
01.01.25	2,690,818.75		1,786,305.25	5,174,248.00

**CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT
CAUSE NUMBER 43190**

Debt Service

	2004 Bonds	2005 Bonds	Proposed Bonds	Total Debt Service
07.01.25			605,485.25	
01.01.26			4,570,485.25	5,175,970.50
07.01.26			498,826.75	
01.01.27			4,673,826.75	5,172,653.50
07.01.27			384,849.25	
01.01.28			4,789,849.26	5,174,698.51
07.01.28			263,932.00	
01.01.29			4,908,932.00	5,172,864.00
07.01.29			135,730.00	
01.01.30			5,035,730.00	5,171,460.00
	<u>37,059,343.14</u>	<u>9,861,620.00</u>	<u>67,919,671.01</u>	<u>114,836,625.15</u>

ROGER A. PETTIJOHN – PUBLIC’S EXHIBIT NO. 2

TESTIMONY OF ROGER A. PETTIJOHN
CAUSE NO. 43190
CITY OF EVANSVILLE
MUNICIPAL WATER DEPARTMENT

1 **I. Introduction of OUCC Witness**

2 **Q: Please state your name and business address.**

3 A: My name is Roger A. Pettijohn and my business address is Indiana Government
4 Center North, 100 North Senate Avenue, Room N501, Indianapolis, Indiana
5 46204.

6 **Q: By whom and in what capacity are you employed?**

7 A: I am employed by the Indiana Office of Utility Consumer Counselor (OUCC) as a
8 Senior Utility Analyst for the Water/Wastewater Division.

9 **Q: What are the duties and responsibilities of your current position?**

10 A: As a Senior Analyst for the OUCC Water/Wastewater Division, I am responsible
11 for evaluating the condition, operation, and project improvements proposed by
12 investor owned, municipal, and not-for-profit water and sewer utilities.

13 **Q: What is your professional background and experience?**

14 A: After teaching several years for the Department of Defense Dependents Schools, I
15 accepted an administrative position as Utility Director for the City of Elwood,
16 Indiana in 1976. Subsequently, I assumed the responsibilities of operator in
17 charge of the water and wastewater facilities. In 1980, I accepted a position as
18 Waterworks Superintendent for the City of Marion, Indiana. After taking early

1 retirement from the City of Marion in 1995, I served as a project manager and
2 salesman for a firm representing various manufacturing companies in the business
3 of providing water and wastewater treatment equipment to municipalities and
4 industry. I currently maintain a Class I Wastewater Treatment License, as well as
5 Water Treatment System 3 and System 5 designations (WTS-3 and WTS-5)
6 which are ground and surface water treatment plant certifications respectively,
7 and a Distribution System Large (DS-L) license, all issued by the State of Indiana.

8 **Q: Have you previously testified before the Commission?**

9 **A:** Yes, both on behalf of utilities and as an analyst for the OUCC.

10 **II. Preparation for and Purpose of Testimony**

11 **Q: What investigations have you performed in this Cause?**

12 **A:** I recently toured Petitioner's treatment facilities with its General Manager, Mr.
13 Harry Lawson. My main focus was on the proposed capital improvements in this
14 Cause, but I also verified whether projects approved and funded in Petitioner's
15 last rate case had been completed.¹ I also reviewed Petitioner's case-in-chief,
16 prepared questions for discovery, and participated in technical discussions with
17 Petitioner and other OUCC staff.

¹ As discussed later in this testimony, all major capital improvement projects authorized in Petitioner's last rate case were completed. Some of the smaller projects are still underway. However, water storage tank refurbishments the OUCC expected Petitioner to complete as part of a regular maintenance schedule were not performed.

1 **Q: What is the purpose of your Testimony?**

2 A: I will be responding to the testimony of Mr. Harry Lawson and Mr. Chris Gale,
3 P.E., who was retained by Petitioner to develop its "10-Year Master Plan."²
4 Specifically, I will be discussing Petitioner's past and proposed system
5 improvements.

6 **III. Characteristics of Petitioner's Current Water Utility System**

7 **Q: What are Petitioner's system facility characteristics and demand?**

8 A: Petitioner's Treatment Plant has a rated capacity of 54 million gallons per day
9 (MGD), consisting of two (2) separate trains or treatment sections. Its sole source
10 of supply is the Ohio River. Petitioner's 2005 Annual Utility Report to the IURC
11 shows a combination of nine (9) elevated and ground storage vessels, with a
12 combined capacity of 36 million gallons. The distribution network includes
13 approximately 1,000 miles of main, more than 5,000 hydrants, and nine (9)
14 booster stations. Petitioner serves approximately 62,000 residential and 2,300
15 industrial/commercial customers. Petitioner's average daily pumpage is
16 approximately 28 MGD, with a 2004 peak day of 42 MGD.

17 Petitioner complies with recommended engineering standards of being able to
18 meet a one (1) day demand even if its largest treatment unit or high lift pump is
19 out-of-service. However, the 35 MGD firm capacity plant is not capable of

² A copy of the City of Evansville's "10 Year Master Plan" was provided by Petitioner in its Exhibit CG-1.

1 meeting peak demand if a 15 MGD-rated flocculation basin is out-of-service – a
2 situation that will be addressed in Petitioner's proposed system improvements.
3 Available water storage capacity (disregarding fire flow requirements) is adequate
4 from a network perspective, but not necessarily at individual zonal levels.
5 Petitioner also supplies wholesale water to Gibson Water (which serves the
6 Toyota plant in Princeton), Elberfeld Water, American Water Company at
7 Newburgh, and the German Township Water District.

8 **IV. Capital Improvement Projects and Use of Funds From Last Rate Case**

9 **Q: What bond funding and conditions did the Commission authorize regarding**
10 **system improvements in Petitioner's last rate case, Cause No. 42176?**

11 A: The Commission authorized the issuance of waterworks revenue bonds not to
12 exceed \$25,380,000 at 7% interest in order to fund certain capital improvement
13 projects. Those projects were intended to improve service and reliability at the
14 North Pressure Zone through improved pumping capacity and water main
15 improvements. Further, under the Order in Cause No. 42176, Petitioner was to
16 "renovate certain storage tanks, make upgrades to its treatment plant and
17 implement a Supervisory Control and Data Acquisition ("SCADA") system."

18 **Q: Has Petitioner fulfilled those requirements?**

19 A: Petitioner has completed all major capital improvement projects approved in
20 Cause No. 42176 and continues to implement other minor system improvements
21 authorized in that case, based on Petitioner's "10-Year Master Plan." The latest

1 "Annual Project Status Report for Year Ending 12/31/06," submitted by Petitioner
2 as a condition of the bond funding approved in Cause No. 42176, showed a
3 remaining balance of approximately \$7.5 million at the end of the 2006 (out of the
4 \$25.38 million bond issuance authorized in that case).³ Completed projects from
5 Cause No. 42176 include the following items -- all aimed at improving service
6 reliability in the North Pressure Zone:

- 7 1) Replaced First Avenue and Weinbach booster stations (\$1.2 M)
- 8 2) 36" main extension on Second Avenue (\$3 M)
- 9 3) 36" main extension on Old State Road and a 30" extension on U.S. 41,
10 (\$5.7 M)

11 A number of other projects authorized in Cause No. 42176 have already been
12 completed. For example, Petitioner has already installed a chemical feed system,
13 replaced the filter plant roof, and installed a SCADA system (although some
14 degree of software refinement and incorporation of new equipment are still
15 needed). The Petitioner is also close to completing its authorized replacement of
16 high service pumping and flow metering equipment. (See RAP Attachment 1.)

17 OUCC Data Request Set No. 1, Q-44 issued in this case (Cause No. 43190) asked
18 Petitioner to provide a tank maintenance history over the last ten (10) years along
19 with appropriate renovation details. Petitioner provided a summary table
20 detailing tank projects for seven (7) of its ten (10) tanks. However, the table
21 shows that no significant work (*e.g.*, pit welding, repair, or application of coating

³ However, as discussed later in this testimony, with additional capital projects completed during the first several months of 2007, the Bond Fund balance has been significantly reduced, with only \$120,000 (approx.) remaining, as of February 8, 2007.

1 systems) has been performed on any of Petitioner's water storage tanks since its
2 last rate case, even though routine tank refurbishment activity was envisioned at
3 that time. (See RAP Attachment 2.)

4 **Q: Did you find any indication of why no significant tank maintenance was**
5 **performed since Petitioner's last rate case?**

6 A: I noticed that Petitioner experienced significant cost over-runs on capital
7 improvement projects authorized and funded in its last rate case. The cost over-
8 runs were primarily due to increased steel and other material costs. Petitioner's
9 Bond Fund cash balance report dated February 8, 2007, showed a remaining
10 balance of only \$120,000 (approx.).⁴ That amount is not sufficient to cover the
11 cost of painting or performing other significant refurbishments on Petitioner's
12 water storage tanks. At this point, the remaining \$120,000 (approx.) from the
13 bonds Petitioner issued in Cause No. 42176 could be used to repair storage
14 facilities not attended to earlier or to help fund the next high-priority project from
15 Petitioner's "10-Year Master Plan." (See RAP Attachment 3.)

16 Although there are no funds earmarked for tank renovations in the new bond
17 issuance proposed in this case, Petitioner should have approximately \$188,000 in
18 annual revenue from rates available for needed tank maintenance once new rates
19 are approved and implemented. The OUCC acknowledges that it may be
20 reasonable to postpone significant tank maintenance work until Petitioner's new 1

⁴ As previously noted, Petitioner has spent almost the entire 2006 year-end Bond Fund balance (approximately \$7.5 million as of 12-31-06) completing capital improvement projects authorized in Cause No. 42176. (For additional detail, see RAP Attachment 1.)

1 MG Killian storage tank (which is to be funded through Petitioner's new proposed
2 bond issuance) is operational.

3 **Q: Do you have any recommendations concerning future tank refurbishment**
4 **projects?**

5 A: If tanks are allowed to deteriorate, repairs become more costly in terms of degree
6 of blast (SSPC grade) and coating systems required. Therefore, the OUCC
7 recommends that Petitioner place greater emphasis on water storage tank
8 maintenance after its new proposed bond issuance is approved. Specifically, the
9 OUCC recommends that Petitioner be required to file a proposed tank
10 refurbishment schedule by the end of 2008 (and serve a copy on the OUCC)
11 covering Petitioner's seven (7) steel water storage tanks, to help ensure adequate
12 maintenance. The filing should include a proposed schedule for refurbishing the
13 tanks, copies of any related professional reports, the recommended degree of blast
14 (SSPC-grade), paint system recommendations, and cost estimates.

15 **V. Petitioner's Proposed Capital Improvement Projects**

16 **Q: What projects does Petitioner plan to fund through this rate case?**

17 A: Some of the major projects are outlined in the testimony of Mr. Lawson and Mr.
18 Gale, together with the cost estimates noted parenthetically below:

- 19 1) Adding a new 1 MG storage tank in the Killian pressure zone (\$2.6 M)
- 20 2) Veterans Memorial water main replacement project (\$2.1 M)
- 21 3) INDOT main relocation projects (\$3 M)
- 22 4) Reconditioning North Plant flocculation basins (\$1.5 M)

1 5) Adding a third set of Primary and Secondary Basins (\$6 M)

2 6) Adding two gravity filters (\$3.6 M)

3 **Q: Why are these projects needed?**

4 **A:** Following is a brief explanation of why each of the above projects is needed:

5 1) Adding a New 1 MG Killian Storage Tank: First, the Killian
6 Pressure Zone is supplied by a single pipe with a single .5 MG storage tank.
7 Having a single source of storage creates some uncertainty regarding service
8 reliability. Second, the University of Southern Indiana (USI), which is located in
9 the Killian Zone, is expected to experience an overall demand increase of 570,000
10 GPD over the next several years. Finally, the design for fire flow demand is set at
11 3,500 GPM for three (3) hours, for a total of 630,000 gallons. Since current
12 infrastructure is not sufficient to meet that criterion, Petitioner's plan to construct
13 a new 1 MG storage tank in the Killian pressure zone is both reasonable and
14 necessary.

15 2) Veterans Memorial Water Main Replacement Project: The
16 Veterans Memorial main, installed in 1967, consists of 48" concrete cylinder pipe
17 (CCP), and is the main feed to the east side of Petitioner's water utility system.
18 Sections of the main have failed in recent years, necessitating costly repairs. Only
19 a portion of the main is being replaced at this time. (RAP Attachment 4.)

20 3) INDOT Main Relocation Projects: Although only \$3 million is
21 being requested in financing, Petitioner plans to spend approximately \$4 million
22 over the next twelve (12) months for main relocation projects stemming from

1 INDOT road-widening activities. Due to its large customer base, the Petitioner
2 does not qualify for grants or other pecuniary contributions. INDOT often
3 participates in project cost sharing to varying degrees in the case of smaller
4 communities. The upside is the replacement main will be new and perhaps of
5 greater size or carrying capacity. It will also count toward Petitioner's ongoing
6 main replacement program, not specifically mentioned in Petitioner's testimony.

7 4) Reconditioning North Plant Flocculation Basins: Petitioner reports
8 not having taken the North Plant primary or secondary basins or clarifiers out of
9 service for comprehensive reconditioning since they were newly installed in 1946.
10 Petitioner plans to replace and repair baffles, valves, scrappers, bridges,
11 walkways, etc., as needed.

12 5) Adding a Third Set of Primary and Secondary Basins: With a firm
13 capacity of only 42 MGD, the basins represent the most limiting treatment
14 process feature. Adding a third set of basins will increase firm capacity to meet a
15 peak day demand of up to 54 MGD.

16 6) Adding Two Gravity Filters: Two (2) filters were decommissioned
17 in 1999. Petitioner's planned addition of two (2) new filters will add six (6) MGD
18 to its system, bringing plant capacity back up to its pre-decommissioning level
19 (60 MGD). Since filtering capacity is the second most limiting factor in
20 Petitioner's water utility system, these additions will provide significant
21 additional plant capacity.

1 **Q: Do you agree with the need for Petitioner's proposed capital improvement**
2 **projects?**

3 A: Yes, the improvements will improve service reliability through greater Treatment
4 Plant capacity and delivery. In its upcoming NPDES permit renewal with IDEM,
5 Petitioner might be required to collect, pump and dispose of residuals produced
6 from flocculation/sedimentation basins. These solids are currently being returned
7 to the River along with backwash water. Mr. Gale estimated a cost of 4 million
8 dollars (\$4.0M) or more to implement those environmental protection measures.
9 (See RAP Attachment 5.) Up to this point, solids or residuals have been returned
10 to the Ohio River (which, due to its size, results in significant dilution). However,
11 it is possible that IDEM will impose additional restrictions when it issues
12 Petitioner's next NPDES Permit.

13 **Q: What are your recommendations concerning the capital improvement**
14 **projects Petitioner plans to fund through its requested rate increase?**

15 A: I recommend that Petitioner be authorized to make those capital improvements to
16 its water utility system and continue with other project improvements identified in
17 its "10-Year Master Plan," with emphasis on high priority projects outlined in the
18 testimony of Mr. Lawson and Mr. Gale. I also recommend that Petitioner file
19 annual reports with the IURC (and serve copies on the OUCC) to update the
20 Commission on the status of the capital projects being funded in this rate case.
21 Those reports should include the following information for each project on
22 Petitioner's "2007-2009 Ranked Capital Project" list (Petitioner's Exhibit CG-3):⁵

⁵ For the Commission's convenience, I have attached a copy of Petitioner's Exhibit CG-3 to this testimony.
(See RAP Attachment 6.)

1 the estimated project cost, the actual project cost to date, the total project cost
2 when completed, and projected and actual completion dates, once known.

3 **VI. Rate Relief Requested Under Three-Phase Implementation Schedule**

4 **Q: What relief is the Petitioner requesting in this rate case?**

5 A: Petitioner is seeking relief from increased operations and maintenance costs and
6 intends to continue system improvements identified in its comprehensive "10
7 Year Master Plan," already discussed above.⁶ The progression under that plan
8 will require additional bond funding of approximately \$36 million over the next
9 three (3) or four (4) years, requiring rate adjustments of 12.1% in the first year,
10 another 16.8% in the second year, and an additional 9.6% in the third year.
11 Petitioner's proposed rate increase is more fully addressed in the testimony of the
12 OUCC's accounting witness, Ms. Margaret Stull. The OUCC supports
13 Petitioner's proposed phasing-in of the proposed rate increase to help mitigate the
14 financial impact on consumers.

15 **VII. Water Conservation Efforts**

16 **Q: Does Petitioner have a conservation program in place?**

17 A: Petitioner does not have a structured or goal-oriented water efficiency or
18 conservation program. However, it appears to have maintained acceptable lost

⁶ Evansville's "10 Year Master Plan" (a copy of which was provided as Petitioner's Exhibit CG-1) was developed primarily by Chris Gale of HNTB, with input from American Water ("AW") and from the Petitioner.

1 water rates (i.e., under 15%), especially given the size of its system, with close to
2 1,000 miles of water main to maintain. Petitioner also has information and links
3 to "Water Conservation Tips" available for customers to access on its Webpage
4 (www.ewsu.com). Petitioner has a number of system expansion projects in its
5 "10-Year Master Plan," some of which might be avoided or delayed through more
6 efficient water usage. The United States Environmental Protection Agency
7 ("EPA") Website contains several case studies demonstrating the success of water
8 conservation programs.

9 **Q: Has the United States Environmental Protection Agency ("EPA") made any**
10 **official statements about efficient water use?**

11 A: Yes. The EPA Office of Water made an official "*Statement of Principles on*
12 *Efficient Water Use*" in December, 1992. That statement read as follows:

13 In order to meet the needs of existing and future populations and
14 ensure that habitats and ecosystems are protected, the nation's
15 water must be sustainable and renewable. Sound water resource
16 management, which emphasizes careful, efficient use of water, is
17 essential in order to achieve these objectives.

18 Efficient water use can have major environmental, public health,
19 and economic benefits by helping to improve water quality,
20 maintain aquatic ecosystems, and protect drinking water resources.
21 As we face increasing risks to ecosystems and their biological
22 integrity, the inextricable link between water quality and water
23 quantity become more important. Water efficiency is one way of
24 addressing water quality and quantity goals. The efficient use of
25 water can also prevent pollution by reducing wastewater flows,
26 recycling industrial process water, reclaiming wastewater, and
27 using less energy.

1 **Q: Has the EPA created any water conservation plan guidelines to help water**
2 **utilities plan and implement effective goal-oriented water conservation**
3 **strategies?**

4 **A:** Yes. The 1996 Amendments to the Safe Drinking Water Act ("SDWA")
5 recognized the potential value of water conservation and required the EPA to
6 publish water conservation guidelines within two years of the Act's passage. On
7 August 6, 1998, the EPA published Water Conservation Plan Guidelines
8 ("Guidelines") (EPA Document No. EPA-832-D-98-001) for use by water utilities
9 in planning and implementing effective goal-oriented water conservation
10 strategies. The EPA Guidelines include the following statement:

11 These Guidelines are intended to help systems plan and implement
12 effective and goal-oriented water conservation strategies. The
13 Guidelines highlight the conservation goal of long-term reductions
14 in capital facility costs. They provide a methodology for systems
15 that are planning capital improvements (namely, SRF applicants)
16 to incorporate conservation into their plans. The conservation plan
17 can aid systems in making adjustments to planned capital
18 improvements and demonstrating the system's commitment to
19 efficient water supply operations.

20 Conservation planning can be beneficial to most water systems, not
21 just those with an impending capital project. Even systems that
22 consider supplies plentiful and facilities adequate find that
23 conservation planning helps use existing resources more efficiently
24 and save resources over the long term.

25 The planning approach reflected in these Guidelines is consistent
26 with the idea of integrated resource planning (IRP), which
27 emphasizes a balanced consideration of supply-management and
28 demand-management options in meeting a water system's needs.
29 According to this perspective, conservation can help water systems
30 avoid supply-side costs through cost-effective demand-side
31 management strategies. Ideally, integrated planning combines the
32 utility's best efforts in supply and demand management.

1 The benefits and costs associated with water conservation can be
2 measured from a variety of perspectives: water suppliers, water
3 customers, and society at large. For practical reasons, the
4 Guidelines emphasize the perspective of the water supplier.
5 Systems following the Advanced Guidelines are encouraged to
6 examine conservation from other perspectives, including the
7 broader societal viewpoint.

8 The OUCC supports the efficient use of Indiana's natural resources, and water is
9 one of those valuable natural resources. The OUCC recommends that Petitioner
10 utilize the EPA guidelines to develop a water conservation plan that meets
11 Evansville's unique characteristics and needs.

12 **VIII. Tank Painting Amortization Period**

13 **Q: What, if any, concerns do you have regarding Petitioner's proposed tank**
14 **painting amortization period?**

15 A: Petitioner is currently proposing to amortize its tank coating systems over ten (10)
16 years. The OUCC recommends a 15-year amortization period based on the
17 improved epoxy and urethane coating systems now available. Of course, surface
18 preparation and proper application of any coating system is paramount to its
19 longevity. The OUCC's recommended tank painting adjustment appears in
20 "Schedule 6, Adjustment 7" in Ms. Stull's testimony.

21 **IX. Recommendations**

22 **Q: Please summarize your recommendations for the Commission.**

23 A: To recap, I recommend the Commission:

- 1) Require Petitioner to complete any unfinished capital improvement projects approved in its last rate case and to continue implementing the projects on its "2007-2009 Ranked Capital Project" list (Petitioner's Exhibit CG-3), which is based on recommendations developed in Evansville's "10-Year Master Plan." Emphasis should be placed on those high priority projects outlined in the prefiled testimony of Mr. Lawson and Mr. Gale.
- 2) Require Petitioner to file a proposed tank refurbishment schedule by the end of 2008 (and serve a copy on the OUCC) covering all of Petitioner's steel water storage tanks - currently seven (7) tanks. The filing should include a proposed schedule for refurbishing the tanks, copies of any related professional reports, the recommended degree of blast (SSPC-grade), paint system recommendations, and cost estimates
- 3) Require Petitioner to file an annual report with the Commission, and serve a copy on the OUCC, outlining the status of each of the above capital improvement and tank refurbishment projects. Petitioner's annual status reports should include the following information for each of the above projects: the estimated project cost, the actual project cost to date, the total project cost when completed, and projected and actual project completion dates, once known.
- 4) Require Petitioner to establish a Water Conservation and Efficient Use Program by the end of 2008, consistent with EPA guidelines.
- 5) Require that Petitioner use a tank coating amortization period of at least 15 years.

Q: Does this conclude your testimony?

A: Yes.

EVANSVILLE WATER UTILITY

2004 WATER BONDS - ANNUAL PROJECT STATUS REPORT FOR YEAR ENDING 12/31/06

PAR AMOUNT OF BONDS	25,380,000.00
BOND DISCOUNT	(146,287.10)
BOND PREMIUM	151,034.50
UNDERWRITER'S DISCOUNT	(254,598.51)
BOND INSURANCE	(73,747.48)
SURETY BOND FOR DEBT SERVICE RESERVE	<u>(37,821.81)</u>
TOTAL CASH PROCEEDS FROM BOND	25,018,580
INTEREST FROM BOND INVESTMENTS	994,412.30
TOTAL CASH IN 2004 WATER BOND FUND	<u>26,012,991.90</u>
EXPENDITURES ON BOND FUND PROJECTS AS 12/31/06	<u>(18,557,356.75)</u>
CASH BALANCE IN BOND FUND 12/31/06	<u><u>7,455,635.15</u></u>

EVANSVILLE WATER UTILITY

2004 WATER BONDS - ANNUAL PROJECT STATUS REPORT FOR YEAR ENDING 12/31/06

PROJECT DESCRIPTION	ACTUAL COSTS AT 12/31/2006	OUTSTANDING CONTRACTED COSTS AT 12/31/06	ESTIMATED COSTS TO COMPLETE PROJECT
Replace First Avenue and Weinbach Booster Stations	1,197,788.10	0.00	Project completed January 2005
36" Main extension on Second Avenue - from intersection on Market at and Ingle to the intersection of Third Avenue and Morgan Avenue	3,067,679.21	0.00	Project completed July 2005
12" Water Main extension along Pollack Avenue	90,671.73	0.00	Project completed December 2004
Diamond Avenue Water Line Replacements at the intersection of St Joseph, Kratzville Rd. and 1st Avenue	615,426.55	0.00	Project completed August 2005
Relocation of 12" main at Petersburg Rd and Senate	32,107.48	0.00	Project completed December 2004
Main Extensions (1) 36" main on Old State Rd from Campground Booster Station to Boonville New Harmony Road and (2) 30" main on US 41 from Boonville New Harmony Road to Volkman Road	6,678,902.33	0.00	Project Completed Year 2006
16" Main Extension on Harmonyway	1,835,107.66	0.00	Project Completed Year 2006
48" Main Replacement on Veteran's Memorial Parkway	129,405.00	0.00	Design Phase Completed
Installation of SCADA System at the Filtration Plant	191,700.00	701,188.00	Construction in progress; estimated to be completed in 2007

PROJECT DESCRIPTION	ACTUAL COSTS AT 12/31/2006	OUTSTANDING CONTRACTED COSTS AT 12/31/06	ESTIMATED COSTS TO COMPLETE PROJECT	
High Service Pumps and Flow Metering Project	560,110.67	1,275,609.00	150,000.00	Construction in progress; estimated to be completed in 2007
Filter Plant Process Improvements - Chemical Feed System	923,535.00	4,477,623.31	145,775.00	Construction in progress; estimated to be completed in 2007
Replace Filter Plant Roof	2,597,234.33	705,440.00		Construction in progress; estimated to be completed in 2007
Bond Issue Costs	134,859.69	0.00		
Evaluate membrane filtration for capacity needs and turbidity requirements and evaluate polymer addition for enhanced coagulation to comply with Stage 1 DBPR	480,468.66	0.00		Completed Year 2004
Study to evaluate Water Distribution and Treatment Plant Improvements	22,360.34	0.00		Completed year 2005
TOTAL	18,557,356.75	7,159,860.31	295,775.00	

Evansville Water and Sewer Tank Projects

Tank Name		Capacity (Gal)	Year	Professional Services	Fees
Volkman Tank		1,500,000	1999	Built	
TIC Project No.	Tank Name	Capacity (Gal)	Year	Professional Services	Fees
H025.01	Lincoln Ave. Tank	500,000	1990	Evaluation-Washout-Disinfection	\$3,640.00
			1990	Detailed Technical Specifications	\$4,500.00
			1990	Contractor-G&M Painting	\$205,000.00
			1990-91	Contract Administration & Resident Observation	\$20,000.00
			1992	Warranty Observation	\$975.00
			Total		\$234,115.00
H025.09	Campground Reservoir	20,000,000	1994	Evaluation	\$4,770.00
			1994	Detailed Technical Specifications	
				Dilig Brothers Lumber & Construction	\$8,480.00
			1994	Bid Review	\$500.00
			1995	Mid-Point Project Observation	\$838.00
			Total		\$14,588.00
H025.10	Killian Reservoir		1996	Evaluation-Washout-Disinfection	\$5,100.00
			1996	Detailed Technical Specifications	\$18,650.00
				Contractor-TMI Coatings Inc.	\$380,620.00
			1997	Bid Review	\$1,422.50
			1997	Pre-Construction Meeting	\$410.00
			1997	Resident Observation	\$48,744.75
			1999	Warranty Observation	\$1,200.00
			Total		\$456,147.25

TIC Project No.	Tank Name	Capacity (Gal)	Year	Professional Services	Fees
H025.11	Boonville-New Harmony Tank	1,000,000	1996 Evaluation		\$3,650.00
			2001 Update Evaluation-Washout-Disinfection		\$4,525.00
			2002 Detailed Technical Specifications		\$12,125.00
			2002 Contractor-G&M Painting		\$405,797.00
			2002 Calcs- Removal of Spider Rods		\$1,750.00
			2002 Bid Review		\$750.00
			2002 Contract Administration		\$2,500.00
			2002 Resident Observation		\$30,000.00
			2004 Warranty Observation		\$1,950.00
			Total		\$463,047.50
H025.12	Grimm Road Tank	500,000	1996 Evaluation		\$4,600.00
			1996 Detailed Technical Specifications		\$8,620.00
			Contractor-TMI Coatings Inc.		\$151,000.00
			1997 Bid Review		\$1,372.50
			1997 Pre-Construction Meeting		\$555.00
			1997-98 Contract Administration &		
			Resident Observation		
			1998 Warranty Observation		\$26,979.50
			Total		\$1,500.00
H025.13	Upper Mt Vernon Tank	500,000	1996 Evaluation		\$3,450.00
			Total		\$3,450.00

6-40

Evansville Water Utility
2004 Water Bond Fund

CASH BALANCE IN 2004 WATER BOND FUND AT 2/28/07

Cash from Bond Sale	\$	25,018,580.00
Interest Income - Year 2004	\$	41,484.69
Interest Income - Year 2005	\$	460,681.98
Interest Income - Year 2006	\$	492,245.63
Interest Income - Jan 2007	\$	7,809.09
Interest Income - Feb 2007	\$	60,610.18

Total Bond Fund Cash \$ 26,081,411.57

Cash Payments - Years 2002 - 2004	\$	(7,137,775.42)
Cash Payments - Year 2005	\$	(7,002,943.65)
Cash Payments - Year 2006	\$	(4,416,638.08)
Cash Payments - Jan 2007	\$	(1,127,260.01)
Cash Payments - Feb 2007	\$	(897,094.39)

Total Cash Payments on Bond Fund Projects \$ (20,581,711.55)

Cash Balance in 2004 Water Bond Fund at 2/28/07 \$ 5,499,700.02

INCOMPLETE PROJECTS/CONTRACT BALANCES

Empire Contractors - Roof Construction	\$	53,245.00
PPMI Construction Company - Chemical Feed System	\$	3,776,642.95
Deig Bros - High Serv Pump & Flow Metering	\$	514,841.70
Ingen - SCADA Design	\$	81,900.00
State Group - Scada Construction	\$	249,459.50
Armstrong - Design High/Low Service Pumps & Flow Monitoring	\$	101,719.62
HNTB- Filter Plant Roof/Plant Improv. Design	\$	595,909.37
CED Electric - VFD& SSRV Package	\$	34,860.00
ITT AC/Goulds Pumps - Motor for High Service Pump # 4	\$	37,082.00
ITT Industries - Horizontal Split Case Pumps	\$	174,737.00

Outstanding Contract Balances - Incomplete Projects \$ 5,620,397.14

Outstanding Contract Costs greater than
Cash in Water Bond Fund by \$ 120,697.12

Attachment 34(a)



March 5, 2004

Mr. Rick Glover
EA2/Systems
1931 Allens Lane
Evansville, IN 47720

Subj: 48-inch PCCP Watermain Repair along Veterans Memorial Parkway

Dear Rick:

Included you will find the current T&M labor and material costs for the 48" pipe removal/repair on Veterans Memorial Parkway and a revised Payment Application. Duane Gilles has a copy of all backup associated with the T&M budget for the welding and additional costs associated with the first two joints. The total cost for the project, including all T&M costs are:

Original Contract	\$57,700
Add for use of Flowable Fill	\$9,530
Add for Traffic Control	\$8,900
T&M Amount for Pipe Repair (1 st & 2 nd Joint)	\$52,297
Contract for Repair of 3 rd Joint	\$72,600
Contract for Welding of 3 rd Joint	\$8,000
T&M Amount for Emergency Repair Operations	<u>\$185,933</u>
	\$394,960

Please contact me at mobile 305-6078 if I can be of further assistance.

Respectfully submitted,

A handwritten signature in cursive script that reads "Rick Meunier".

Rick Meunier
Project Engineer
Bowen Engineering



BOWEN
Engineering Corporation

PROPOSAL

Mr. Duane Gilles
EA2/Systems
1931 Allens Lane
Evansville, IN 47720

Subj: 48-inch PCCP Watermain Repair along Veterans Memorial Parkway

Dear Duane:

Thank you for choosing Bowen to prepare a proposal to repair the existing 48-inch PCCP water main that is leaking under the northbound lane of Veterans Memorial Parkway near Waterworks Road.

BASE BID AMOUNT \$ 72,600.00

Inclusions:

1. Supervision, labor, equipment and materials to expose the third joint of the existing 48-inch PCCP approximately 56lf from the B-slew. We have assumed that the top of the pipe is 15'-0" down from the top of the pavement.
2. Bowen will use the trench box, road plates, and ranger system currently on the jobsite.
3. The guardrail in the median will not be removed to ensure a safer project site. Assuming the next section of 48-inch PCCP is 20'-0" in length, removal of guardrail will not be an issue.
4. Casual dewatering utilizing a generator discharging into the adjacent Be-Slew creek has been included.
5. Flowable fill has been included for the backfill of the excavation per the specifications provided by the Evansville City Engineer.
6. Sawcut and restore existing concrete pavement and asphalt shoulder as required. Both were assumed to be 8-inches thick and can be replaced with concrete according to the details provided by the Evansville City Engineer.
7. Builder's risk and liability insurance as is typical for work with the City.
8. Excess soil and asphalt/concrete pavement will be disposed of offsite.
9. Traffic control has been included per the attached information. The design of the traffic control has been coordinated with Richard Meyer, but should additional measures be required at a later date, they will be added on a cost basis without markup. Nothing has been included for the traffic control required during shutdowns to access the air release manhole on the southbound lane. Temporary striping is not included.

Where Service Is More Than A Promise



Industrial and Municipal Contractors

BOWEN

Engineering Corporation

Mr. Duane Gilles
January 22, 2004
Page 2 of 2

Clarifications:

1. Repair of 48-inch PCCP is not included. A lump sum price can be provided after exposing the next joint and determining the method and requirements of repair.
2. We have assumed that there are no existing utilities to contend with in and around our excavation (ex. gas, telephone, fiber-optic, sewer, etc..)
3. Proposal based on straight time wages.
4. Sales tax is excluded.
5. Performance and payment bond was not required with the previous agreement and is therefore excluded.
6. Payment terms 90% net 30 and 10% upon successful completion.
7. This quote is valid for (30) days.

Bowen has a crew available to begin this work immediately. We estimate that it will take 8 to 10 working days to have the pipe exposed for repair upon written direction to proceed with work. Once repairs are made, we estimate that it will take 8 to 10 days to restore the area to its original condition (excluding seeding in Spring 2004). Project is bid with working straight time hours only.

Please contact me at mobile 305-6078 if I can be of further assistance.

Respectfully submitted,

BOWEN CORPORATION



Rick Meunier
Project Engineer

Encl: Bowen traffic control sketches



12/2/03

BOWEN
Engineering Corporation

PROPOSAL

Mr. Duane Gilles
EA2/Systems
1931 Allens Lane
Evansville, IN 47720

Subj: 48-inch PCCP Watermain Repair along I-164

Dear Duane:

Thank you for choosing Bowen to prepare a proposal to repair the existing 48-inch PCCP water main that is leaking under the southbound lane of I-164 near Waterworks Road.

BASE BID AMOUNT \$ 57,700

Inclusions:

1. Supervision, labor, equipment and materials to expose the existing 48-inch PCCP where it is leaking per the attached Bowen Sketches 1 and 2. We have assumed that the top of the pipe is 13'-6" down from the top of the pavement.
2. Not knowing if the leak is isolated to one PCCP joint or if one or more PCCP sticks may need to be removed, we elected to utilize a 10 ft x 20 ft steel trench box along with 20 ft long steel plates to create a sheeted 3-sided cell around the pipe starting approximately 4 ft east of the edge of concrete pavement in the southbound lane. We feel this will give the City more flexibility if there is more than one leak. We can quote a round cased sheeted cell if requested, but we do not advise this based on our site visits.
3. Existing guardrail will be removed and reinstalled as necessary as the sheeted cell will extend just west of the guardrail.
4. Casual dewatering utilizing a generator discharging into the adjacent Be-Slew creek. Silt fence will be installed to protect creek from surface runoff.
5. Sawcut and restore existing concrete pavement and asphalt shoulder. Both were assumed to be 8-inches thick.
6. Topsoil will be stripped, stored and replaced along the banks where disturbed. We have included seeding disturbed areas and erosion matting along the steep slope.
7. Builder's risk and liability insurance as is typical for work with the City.
8. Excess soil and asphalt/concrete pavement will be disposed of offsite.

Where Service Is More Than A Promise



Industrial and Municipal Contractors

Mr. Duane Gilles
December 2, 2003
Page 2 of 2

Clarifications:

1. Repair of 48-inch PCCP to be completed on a T&M basis per attached rates.
2. Traffic control is not included, if required add \$ 8,900
3. We have included sand backfill and compaction testing under the highway, if flowable fill is required add \$ 9,530.
4. We have assumed that there are no existing utilities to contend with in and around our excavation (ex. gas, telephone, fiber-optic, sewer, etc..)
5. Proposal based on straight time wages.
6. Sales tax is excluded.
7. Performance and payment bond is excluded, if required add \$ 523
8. Payment terms 90% net 30 and 10% upon successful completion.
9. This quote is valid for (30) days.

Bowen has a crew available to begin this work immediately. We estimate that it will take 8 to 10 working days to have the pipe exposed for repair upon written direction to proceed with work. Once repairs are made, we estimate that it will take 8 to 10 days to restore the area to its original condition (excluding seeding in Spring 2004).

Please contact me at mobile 305-3775 if I can be of further assistance

Respectfully submitted,

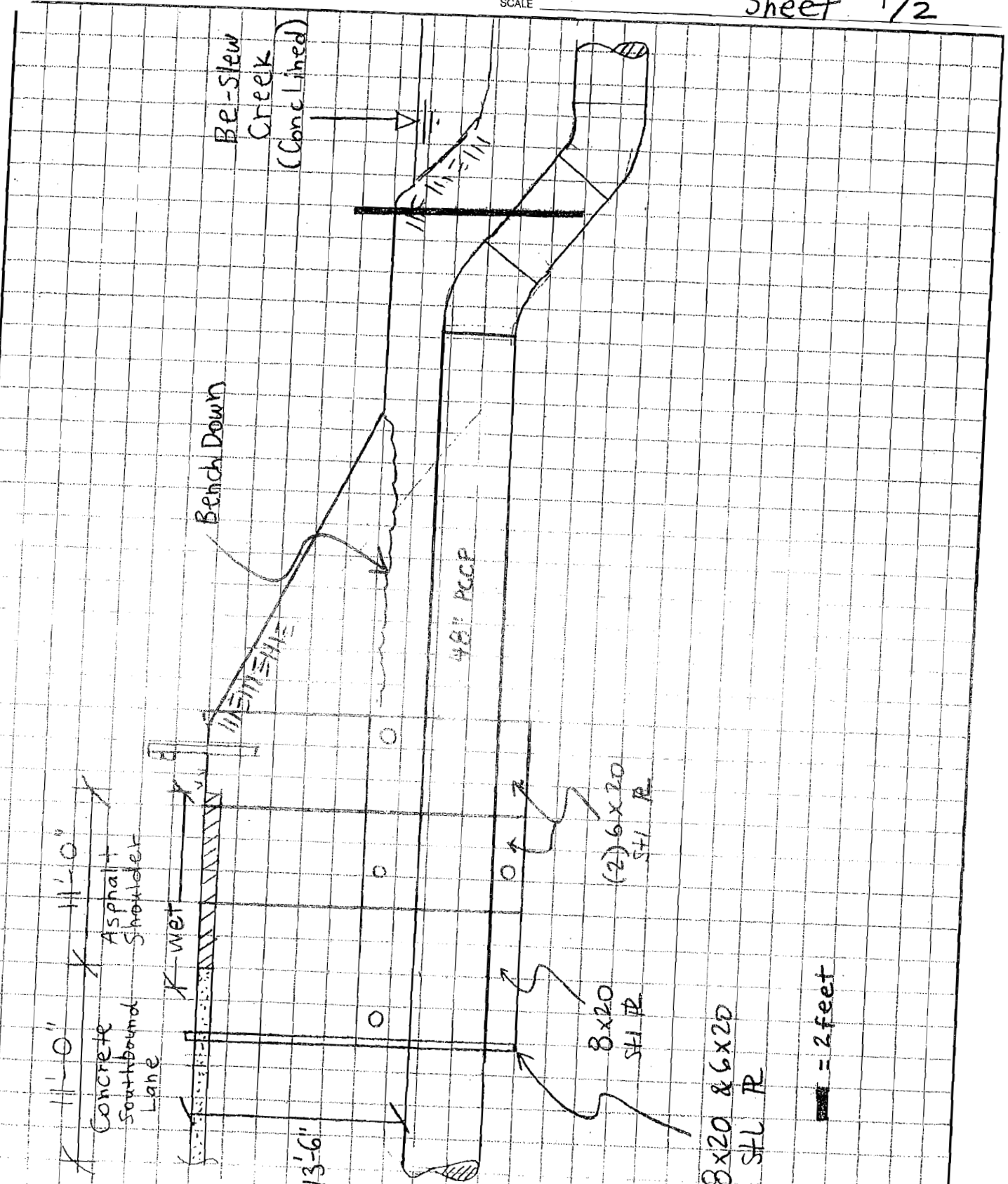
BOWEN CORPORATION


Jeffrey S. Purdue
Area Manager

Encl: Bowen sketches 1 and 2
Bowen T&M rates

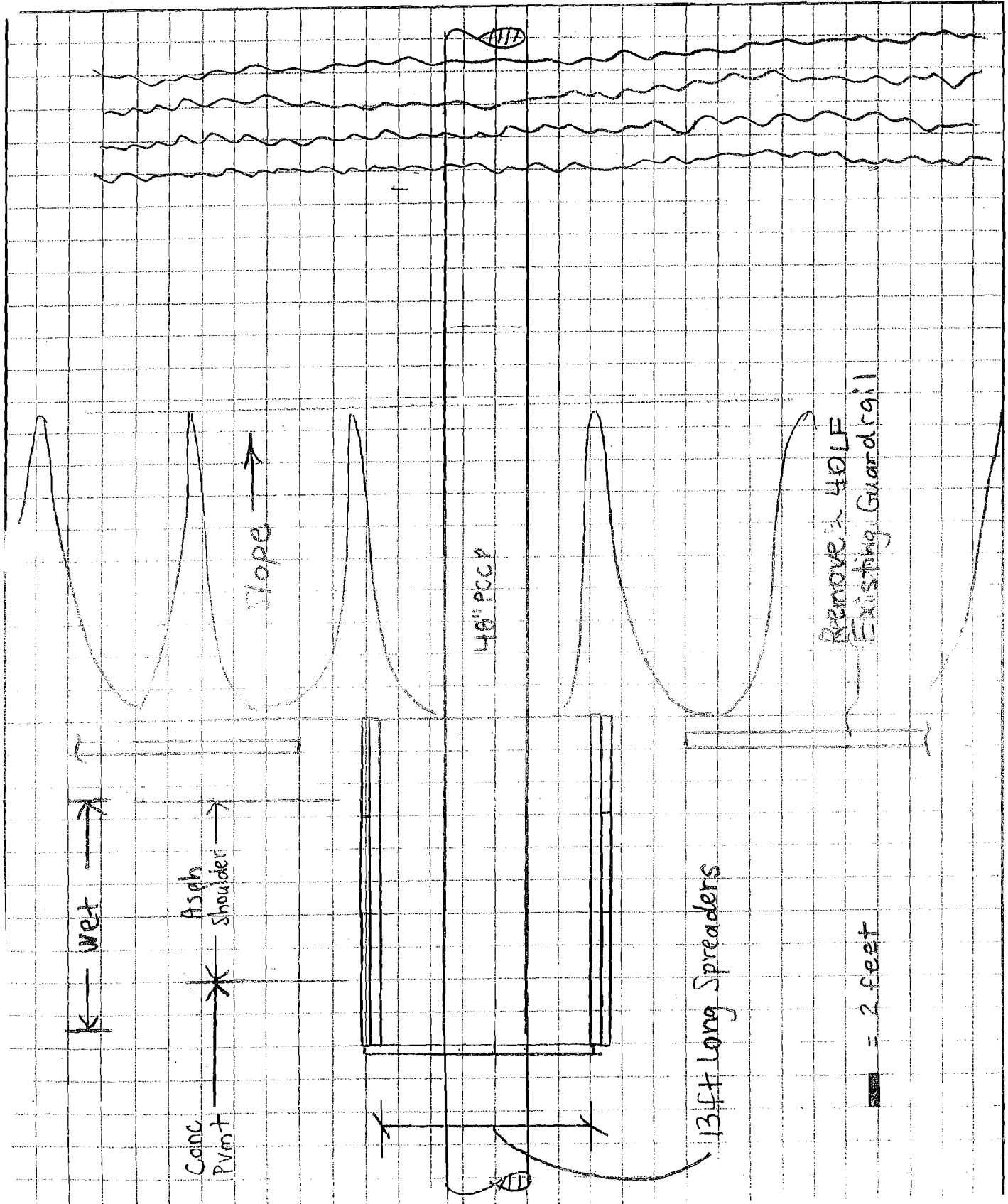
ENGINEERING CORPORATION
8724 EAST MORGAN AVENUE, SUITE B
EVANSVILLE, INDIANA 47715
(812) 475-3880

JOB Evansville 48" PCCP Repair
SHEET NO. I-164 OF _____
CALCULATED BY JSP DATE 12/1/03
CHECKED BY _____ DATE _____
SCALE Sheet 1/2



ENGINEERING CORPORATION
6724 EAST MORGAN AVENUE, SUITE B
EVANSVILLE, INDIANA 47715
(812) 475-3880

JOB Evansville 48" PCCP Repair
SHEET NO. I-164 OF _____
CALCULATED BY JSP DATE 12/1/03
CHECKED BY _____ DATE _____
SCALE _____ Sheet 2/2



EVANSVILLE WATER AND WASTEWATER MASTER PLAN
WATER TREATMENT PLANT
COST ESTIMATING SPREADSHEET

Install Residuals Collection & Pumping Facility

PROJECT NO. 4

General Description

This project involves the installation of a residuals collection and pumping facility for filter backwash & sedimentation processes to be sent directly to the wastewater treatment plant. The facility includes an interceptor sewer for conveying backwash waste and sedimentation basin residuals to a 35,000-gallon, inground lift station, where it is then pumped by dual, 24-in. diameter DI force mains to the wastewater treatment plant. An overflow structure with piping to the Ohio River will be incorporated into the final interceptor manhole for diversion of stormwater runoff to the river during rain events.

Summary of Project Costs

Construction Cost Opinion Without Contingency or Markup (from page 2)		\$1,951,000
Contractor Overhead & Profit Markup	10%	\$195,000
Construction Cost Opinion Without Contingency		\$2,146,000
Contingency	10%	\$214,600
Construction Cost Opinion		\$2,460,600
Engineering, Project Management, and Legal	15%	\$370,000
Total Project Cost		\$2,830,600

EVANSVILLE WATER AND WASTEWATER MASTER PLAN
WATER TREATMENT PLANT
COST ESTIMATING SPREADSHEET

Install Residuals Collection & Pumping Facility

PROJECT COST OPINION WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Structural				
Earthwork	See Detailed Structural Worksheet, p. 3			\$357,100
Concrete	See Detailed Structural Worksheet, p. 3			\$127,525
Metals	See Detailed Structural Worksheet, p. 3			\$27,500
Buildings	See Detailed Structural Worksheet, p. 3			\$0
Demolition	See Detailed Structural Worksheet, p. 3			\$20,000
Process Mechanical & Control Equipment and Major Piping Systems				
D.I. Pipe - 16-in. diam. (buried 25 ft. dp.)	ft	100	\$105	\$10,500
D.I. Pipe - 24-in. diam. (buried 6-10 ft. dp.)	ft	3,200	\$95	\$304,000
RCP Pipe - 36 in. (>25 ft. dp.)	ft	60	\$200	\$12,000
RCP Pipe - 48 in. (>25 ft. dp.)	ft	120	\$300	\$36,000
RCP Manholes - 6 ft. diam. (30 ft. dp.)	each	1	\$10,000	\$10,000
RCP Manholes - 7 ft. diam. (30 ft. dp.)	each	1	\$12,000	\$12,000
RCP Manholes - 8 ft. diam. (40 ft. dp.)	each	2	\$15,000	\$30,000
Sluice Gates - 48 in. x 48 in.	each	1	\$20,000	\$20,000
D.I. Pipe - 16-in. diam. (exposed/flanged)	ft	180	\$75	\$13,500
Plug Valves - 16-in. diam.	each	3	\$4,000	\$12,000
Check Valves - 16-in. diam.	each	3	\$13,000	\$39,000
D.I. Fittings - 16-in. diam. (exposed/flanged)	lump sum	1	\$25,000	\$25,000
D.I. Pipe - 24-in. diam. (exposed/flanged)	ft	40	\$100	\$4,000
D.I. Fittings - 24-in. diam. (exposed/flanged)	lump sum	1	\$16,000	\$16,000
Submersible Pumps - 10,000 gpm	each	3	\$120,000	\$360,000
Level Monitoring/Control System	lump sum	1	\$15,000	\$15,000
Special Construction:				
Reinforcement and structures (6' MH)	lump sum	1	\$35,000	\$35,000
Reinforcement and structures (7' MH)	lump sum	1	\$45,000	\$45,000
Reinforcement and structures (8' MH)	lump sum	1	\$55,000	\$55,000
Sub-Total Construction Cost				\$1,586,125
Total Construction Cost Percentage-Based Estimates			Assumed % of Construction Cost	
Process-Mechanical and Yard Piping Systems			3%	\$47,584
HVAC & Plumbing			2%	\$31,723
Electrical			7%	\$111,029
Instrumentation			3%	\$47,584
Sitework			3%	\$47,584
General conditions, bonds, mobilization, and demobilization			5%	\$79,306
Construction Cost Opinion Without Contingency or Markup				\$1,950,934

EVANSVILLE WATER AND WASTEWATER MASTER PLAN
WATER TREATMENT PLANT
COST ESTIMATING SPREADSHEET

Install Residuals Collection & Pumping Facility

Detailed Structural Worksheet

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Structural Detail				
Earthwork: Dewatering	days	90	\$1,100	\$99,000
Earthwork: Permanent Sheet piling	sq ft	5,500	\$25	\$137,500
Earthwork: Tight Sheet piling	sq ft	0	\$25	\$0
Earthwork: Temporary Sheet piling	sq ft	0	\$20	\$0
Earthwork: Excavation	cu yds	1,300	\$12	\$15,600
Earthwork: Underdrain System	sq yds	0	\$20	\$0
Earthwork: Structural Fill	cu yds	500	\$30	\$15,000
Earthwork: Earth Fill	cu yds	0	\$10	\$0
Earthwork: Pile Foundation	sq ft	1,000	\$90	\$90,000
Earthwork Total				\$357,100
Concrete: Prep. & Rework	lump sum	1	\$15,000	\$15,000
Concrete: Footings	cu yds	30	\$180	\$5,400
Concrete: Base Slab	cu yds	50	\$200	\$10,000
Concrete: Walls	cu yds	175	\$450	\$78,750
Concrete: Floor Slabs	cu yds	0	\$250	\$0
Concrete: Structural Slabs	cu yds	15	\$575	\$8,625
Concrete: Walkways	cu yds	10	\$350	\$3,500
Concrete: Columns	cu yds	0	\$600	\$0
Concrete: Channels	cu yds	25	\$250	\$6,250
Concrete: Precast Troughs	cu yds	0	\$200	\$0
Concrete Total				\$127,525
Metals: Grating	sq ft	400	\$35	\$10,500
Metals: Aluminum Handrail	ft	100	\$50	\$5,000
Metals: Stairway	linear	0	\$500	\$0
Metals: Aluminum Geodesic Dome (interior)	sq ft	0	\$35	\$0
Metals: Aluminum Geodesic Dome (exterior)	sq ft	0	\$2,800	\$0
Metals: Baffles and Weirs	ft	0	\$25	\$0
Metals: Hatches	each	8	\$2,000	\$12,000
Metals Total				\$27,500
Tank Cover	sq ft	0	\$50	\$0
Building: One-Story Building	sq ft	0	\$60	\$0
Building: Two-Story	sq ft	0	\$140	\$0
Building: Pre-engineered	sq ft	0	\$50	\$0
Building Total				\$0
Demolition: Selective	cu ft	400	\$25	\$10,000
Demolition: Structure	cu ft	0	\$10	\$0
Demolition: Mechanical	lump sum	1	\$10,000	\$10,000
Demolition Total				\$20,000

2007-2009 Ranked Capital Improvements Projects
Water Treatment Plant and Distribution System
Evansville, IN

Project Priority Ranking	Project Description	Project Costs					Construction Administration	TOTAL	Remarks
		Construction	Contingency	Planning / Study	Design				
Water Treatment Plant Improvements									
1	Replace three existing V-800 chlorinators with four (4) new V-2000 chlorinators	\$80,000	\$12,000					\$92,000	Finish refurbishment of chlorine feed system
2	Add SCADA to ammonia, sodium chlorite, chlorine dioxide, and chlorine feed	\$140,000	\$21,000		\$25,000		\$12,000	\$198,000	Finish chemical feed SCADA installation
3	Install dechloramination facilities for backwash and filter-to-waste wastewaters to Ohio River (preliminary design)							\$110,000	No Action - Action to occur when required by NPDES
4	Install residuals collection and pumping facility for filter backwash waste & sedimentation processes to WWTP (preliminary design)							\$110,000	No Action - Action to occur when required by NPDES
5	Recondition North Plant flocculation tanks (baffles, mixers & sluice gates) and primary sedimentation basin sludge scrapers	\$1,100,000	\$170,000		\$120,000		\$130,000	\$1,520,000	Update North Plant flocculation and primary sedimentation
6	Replace 4160-volt motor starters on LS Pumps #1-#6. Replace magnetic drive on LS Pump #1 with a VFD and add a control unit.	\$650,000	\$98,000		\$75,000		\$75,000	\$898,000	Update low service pumping electrical
7	Replace 4160-volt motor starters on HS Pumps #8-#10. Replace magnetic drive on HS Pump #9 with a VFD and add a control unit.	\$440,000	\$66,000		\$50,000		\$50,000	\$606,000	Update high service pumping electrical
8	Perform flow pattern analysis for the entire plant for North/South clearwell interconnect			\$50,000				\$50,000	Determine where water is going between N. & S. Plants
9	Add 3rd set of South Plant Primary and Secondary Basins	\$4,400,000	\$660,000		\$500,000		\$500,000	\$6,060,000	Increase flow capacity of South Plant & assist with flow balancing between N. & S. Plants
10	Add Filters 35 and 36 (6 MGD conventional media filters)	\$2,600,000	\$390,000		\$300,000		\$300,000	\$3,590,000	Increase firm filtration capacity to 60 MGD
11	Add two backwash water flow meters	\$50,000	\$8,000		\$10,000			\$68,000	Increase reliability of filter backwash flow metering
12	Renovate Traveling Screen #2	\$80,000	\$12,000		\$15,000		\$5,000	\$112,000	Update raw water screening
13	Individual filter effluent flow meters filters 13-20	\$60,000	\$9,000		\$15,000			\$84,000	Increase reliability of filter effluent flow metering
14	Conduct inventory and replace 220-volt and 480-volt (as needed) circuit breakers throughout the plant.	\$180,000	\$27,000	\$20,000	\$25,000			\$252,000	Increase reliability of electrical service
15	In-depth plant life span/alternate plant feasibility study (collector wells, new surface water plant, etc.)			\$300,000				\$300,000	Determine options for replacing or refurbishing existing plant
16	Re-route South Plant filtered water main to 1.5 MG clearwell	\$200,000	\$30,000				\$50,000	\$280,000	Ensure flow path of S. Plant finished water
17	Complete Phase III of lead paint abatement program in Filter Building	\$200,000	\$29,000	\$7,000	\$25,000		\$20,000	\$281,000	Re-coat lead based painted walls
18	Paint low service building on the interior and exterior	\$80,000	\$12,000		\$12,000		\$10,000	\$114,000	Update coating of low service building
19	Evaluate chlorite/chlorate formation in sed. basins due to chlorine dioxide (ClO ₂) feed in the raw water (during summer)			\$75,000				\$75,000	Determine whether or not chlorite formation is an issue with raw water ClO ₂ feed
20	Evaluate alternative inactivation technologies (UV, Ozone, & membranes) for Crypto inactivation/removal if needed to meet LT2 requirements			\$200,000				\$200,000	Needed if Crypto conc. is greater than 0.075 oocysts/L (Bin 1 limit)
Water Treatment Plant Total								\$15,000,000	

2007-2009 Ranked Capital Improvements Projects
Water Treatment Plant and Distribution System
Evansville, IN

Project Priority Ranking	Project Description	Project Costs					Property / Equipment Acquisition	TOTAL	Remarks
		Construction	Contingency	Planning	Design	Construction Administration			
Distribution System Improvements									
1	Veterans Memorial water main replacement (1,100' of 48")	\$1,670,000.0	\$228,000			\$150,000	\$50,000	\$2,098,000	No Action
2	Replace #2 booster pump at Killian Station w/VFD	\$55,000.0	\$8,000		\$13,000			\$76,000	New Project
3	Vanness Phase III/Hogue/Rosenburg 300' of 12" change services	\$90,000.0	\$14,000					\$104,000	No Action
4	Oak Hill Road 8,000' of 8"	\$530,000.0	\$80,000					\$610,000	No Action
5	Emergency Generator for Operations Building - Phones, Computer Servers and MP-2, Lights, Heating and A/C	\$65,000.0	\$10,000					\$75,000	New Project
6	Stringtown Louisiana to Morgan (1300' of 16")	\$174,000.0	\$26,000		\$30,000	\$10,000		\$240,000	New Project
7	Water main improvements associated w/ INDOT road proj.	\$2,150,000.0	\$327,000		\$250,000	\$150,000	\$100,000	\$3,007,000	Utility current avgs. approx 1M/yr
8	Meter Reading Equipment						\$100,000	\$100,000	New initiatives
9	Industrial Meter Replacement						\$200,000	\$200,000	New initiatives
10	New elevated storage tank in Killian Pressure Zone	\$1,850,000.0	\$280,000	\$20,000	\$80,000	\$280,000	\$50,000	\$2,560,000	Additional storage
11	Old State Rd. West of Hwy 41 (Tie-in to 30" main) (400' of 8")	\$55,000.0	\$8,000				\$63,000	\$63,000	New Project
12	Schaller Ln. (1,200' of 8")	\$55,000.0	\$8,000					\$63,000	New Project
13	Altitude valve and piping modifications at Lincoln Tank.	\$55,000.0	\$8,000		\$13,000			\$76,000	New Project
14	7th Avenue from Shanklin St to Florida St 1,240' of 8"	\$98,000.0	\$15,000					\$113,000	No Action
15	Shanklin St from 7th Ave. to Fulton Ave 1,180' of 8"	\$82,000.0	\$12,000					\$94,000	No Action
16	Morgan Avenue (Hwy 41 to Fares) 2,300' of 12"	\$196,000.0	\$29,000		\$35,000	\$10,000		\$270,000	No Action
17	Add VFD for #1 booster pump at Campground Booster	\$22,000.0	\$3,000		\$8,000			\$33,000	New Project
18	12" main on Mohr Rd - from existing water main to St Joe Ave (1,700')	\$260,000.0	\$39,000		\$40,000	\$20,000		\$359,000	No Action
19	St. George Rd. from Ward Rd to Oak Hill Rd 2,670' of 8"	\$185,000.0	\$28,000					\$213,000	No Action
20	Hydrant Replacement Program	\$48,000.0	\$7,000					\$55,000	No Action
21	Valve Replacement/Installation Program	\$90,000.0	\$14,000					\$104,000	No Action
22	Replace Main on Halfrich From Broadway to Saunders (1,100 of 8")	\$65,000.0	\$10,000					\$75,000	New Project
23	500 block of Boehne Ave., Replace old 2" main and service change-overs (600' of 8" and 1,400' of 8" on Claremont)	\$44,000.0	\$7,000					\$51,000	New Project
24	Ruston Lane and Hwy 57, Tie-in Main on Ruston to Main on Hwy 57 (150' of 12")	\$8,000.0	\$2,000					\$10,000	New Project
25	Replace Main On Frey Road North of Broadway (2080' of 8")	\$130,000.0	\$20,000					\$150,000	New Project
26	Covert Avenue (Shoshone, Pollack & Fuquay) 8,100' of 12"	\$305,000.0	\$46,000		\$45,000	\$25,000		\$421,000	No Action
27	Extend Main to serve the 1800 and 1900 Blk's of S Werner	\$44,000.0	\$7,000					\$51,000	New Project
28	Extend Main to serve Saunders Ave East of Werner and the 1800 Blk of S Craig	\$25,000.0	\$4,000					\$29,000	New Project
Distribution System Total								\$11,300,000	